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Great Knot, Unst, Shetland,
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Scottish Birds is the quarterly journal for SOC members, and is published in March, June, September and December annually.

Containing original papers relating to ornithology in Scotland, topical articles, bird observations, reports of rare and scarce bird sightings, alongside branch and Club-related news, our members tell us that *Scottish Birds* is one of the key benefits of belonging to the SOC. Its different sections have been developed to meet the wide needs of the birdwatching community, and the publication is renowned for its first-class photography.

An archive of the journal is available on the SOC website, where links can be found to other Club publications including the *Scottish Bird Report* online.

More about the SOC...

On the one hand, a birdwatching club. Established in 1936, the Scottish Ornithologists' Club (SOC) is Scotland's bird club with 15 branches around the country and a growing membership of over 3,000. Through a programme of talks, outings, conferences and other events, it brings together like-minded individuals with a passion for birds, nature and conservation.

On the other, a network of volunteers across Scotland, gathering vital, impartial information about our wild birds. The data we collect is made available to conservationists, planners and developers, and is used by organisations such as the RSPB, as one of the first points of reference in informed conservation planning.

Club Headquarters can be found at Waterston House, Aberlady, overlooking the scenic local nature reserve. Housed within, is the George Waterston Library, the largest ornithological library in Scotland, and the Donald Watson Gallery - one of the jewels in the Waterston House crown, exhibiting wildlife art all year-round.

Join us...

As well as receiving *Scottish Birds* every quarter, SOC members have access to a programme of talks and outings across Scotland and affiliation to a local branch of the Club. New members will receive a welcome pack on joining, plus a thank you gift if paying their subscription by direct debit.

Annual membership rates*

Adult (aged 18 and over)	£	36.00
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Junior (aged 17 or under)	£	14.00
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For non-UK addresses, there is a £15.00 supplement to all categories to cover postage.
Rates valid until end of August 2020 (†31 December 2020), subject to change thereafter.

For more information about the Club and its activities, including details of how to join, please visit www.the-soc.org.uk or contact Waterston House on 01875 871 330, or email membership@the-soc.org.uk

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Behind the scenes: 2019 at the SOC

Plate 245. Ian Bainbridge, October 2018.
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Ten days before the conference and I'm drawn to reflecting on my first year as President, trying not to be distracted by the Bullfinches hovering to grab nettle seeds across the road. Bullfinches often seem to do the unexpected - eating tiny seeds despite that big bill, and once I recall watching them pick the seeds from inside Rowan berries. See, distracted already, but birdwatching is like that, and that's what the Club is all about: enjoying birds and contributing useful information for their conservation.

In contrast, discussions in meetings at Waterston House or at SOC Council can seem far removed from that, but they are vital for the sound running of the Club and in determining the future track we take. This was the first year of the new structure with the two Vice Presidents, with Lesley Creamer and her team dealing with a range of policies and procedures ranging from safeguarding to HR and maternity leave; all of which are vital to us as employers and as a charitable organisation. We've also been taking steps towards a revamp of the 'front of house' at Waterston House, and thinking about the best ways to provide effective staffing for that. On the finance side, Treasurer Andy Thorpe and his group have been working away adopting new software which also meets new online financial submissions requirements.

On the birding side of the coin, Jeremy Wilson has now formed the Birding and Science Committee, which pulls together all those elements of the Club, and a successful first meeting a couple of months ago has given us plenty of food for thought. We agreed to look at ways in which we can maximise the value of our birding, provide encouragement and training, maximise the links and mutual benefits between Local Bird Recorders (LBR) and SOC, and much more. We have already reissued an updated version of the LBR guidelines, following on the successful LBR meeting last year; and to link this back to your birding, don't forget to submit all your 2019 records to your local recorder before the end of the year, ideally via BirdTrack, or by any other suitable means.

The Strategy Group has continued to meet and discuss the bigger issues. From these discussions, Council has agreed an updated Arts Strategy, emphasising the purposes of our art activities, primarily that they are to promote the wider aims of SOC. Council has also reiterated our approach to commenting on conservation policy/political issues: that we wish to see all wildlife laws upheld, but are not in a position to offer policy comment on issues of the day. However, we will always try to keep members informed of opportunities to contribute their own views to 'hot' conservation matters being debated across Scotland.

Major success of the year? The launch of the Where to Watch Birds in Scotland app, for which we congratulate Alan Knox, Martin Cook and Jane Allison, along with many contributors. This has helped put SOC in the birding spotlight, has received wide acclaim and quite rightly was the centrepiece of our 2019 annual conference celebrating the best birdwatching sites across Scotland.

And finally, I'd like to pay tribute to our Secretary, Dave Heeley, who stepped down at the AGM. Dave made huge contributions to the work of Council and its Strategy Group, and Management Committee, as well as organising and documenting their meetings. We thank Dave warmly for all he has done for the SOC during his term, and hope he now has more time to thoroughly enjoy his birding!

Ian Bainbridge, SOC President.

Plastic ingestion by Great Skuas at Fair Isle

E.E. HOLMES & R.J. HARRIS

Seabirds are the fastest declining group of birds and ingestion of ocean plastics is believed to be one cause of seabird mortality. Once ingested, plastics can be directly fatal or the cause of reduced breeding potential via a non-lethal effect. This study investigates the direct or indirect consumption of plastic by Great Skuas Stercorarius skua *at Fair Isle. We found plastic fragments in Great Skua pellets, especially those consisting of Fulmar feathers. It seems likely that most plastic ingested by Great Skuas is obtained by eating Fulmars.*

Seabirds can be powerful indicators of marine health (Parsons *et al.* 2008, Hammer *et al.* 2016a) and one threat to their survival is the 'global, pervasive and increasing' threat of plastic pollution (Wilcox *et al.* 2015). Surface feeding species are thought to be the most vulnerable to plastic ingestion (Van Franeker *et al.* 2011b) while species feeding by diving are less affected (Provencher *et al.* 2014). Skuas are top predators, kleptoparasitising, scavenging and predating other bird species, and, consequently, they may ingest plastic from a series of levels within the food chain. Indigestible prey, and thus plastics, can be expelled following ingestion via the regurgitation of pellets; which can then be used for analysis of their diet and ingested plastic (Votier *et al.* 2001, Hammer *et al.* 2016a, b). Examination will reveal associations between prey type, prevalence, and types of (any) plastics consumed. However, it should be remembered that small(er) plastics may be digested further (and not expelled in pellets) and any leaching of toxic chemicals from plastic into tissues will be unrecorded.

Field and laboratory work for this study was undertaken (EEH) on Fair Isle (59.541°N 1.623°W) during June–July 2018. Pellets were collected from both breeding and non-breeding Great Skuas across three main areas of the island with identifiable territories and non-breeder club sites (Figure 1). Within each area a minimum of ten nests and a club site (representative of non-breeding individuals) were identified and visited every four days for pellet collection. Pellets of breeding Great Skuas were collected within a predefined radius of 30 m, using the nest as centre.

In total, 613 pellets were collected for examination. Pellets were dissected and the prey composition proportional to the pellet volume recorded. The main pellets identified were fish or bird types (>80% by volume) (Plate 246a) with <80% content being defined as 'mixed' pellet type (Plate 246b). Bird identified pellets were further subdivided by bone and feather size and colour, and odour of feathers. This resulted in bird pellets ascribed to: Fulmar *Fulmarus glacialis*, Storm Petrel *Hydrobates*

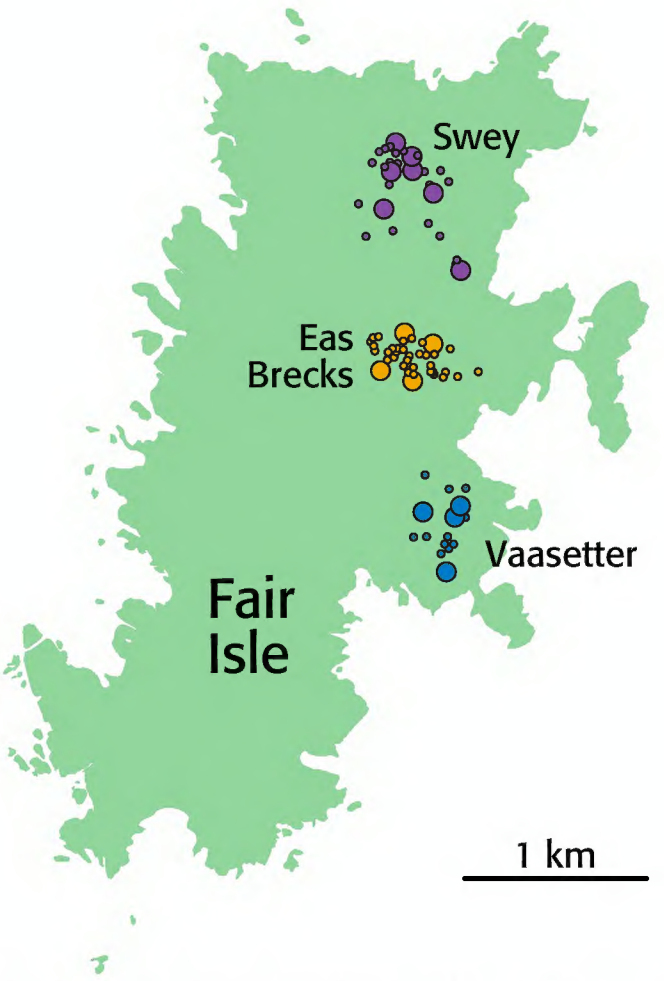

Figure 1. Regions of Fair Isle showing Great Skua territories used in this study. Small dots = territories; large dots = territories where pellets with plastic were found.

Plate 246. Dissected Great Skua pellets from Fair Isle, 2018. **a)** Storm Petrel remains made up 100% of this pellet. **b)** Mixed pellet containing Kittiwake, fish, invertebrate remains, moss, stones and a white plastic fragment.

pelagicus, gull/tern Laridae/Sternidae, passerine Passeriforme, Snipe *Gallinago gallinago* and auk Alcidae. No further identification of fish species was undertaken from the bones present.

Any material considered to be plastic was separated, weighed, photographed and the colour and plastic type (polypropylene/polystyrene) recorded; according to van Franeker *et al.* (2011b). Any particle was categorised as either micro (>1 mm <5 mm), meso (>5 mm <20 mm) or macro (>20 mm <100 mm). Each pellet containing visible plastic, plus an equal number of randomly selected 'non-plastic' pellets, were examined microscopically for further evidence of possible, nano <1 mm, plastic particles.

Following analysis, pellets were ascribed to the most appropriate group (Figure 2).

Accepting the caveat "that the presence of plastic in a particular pellet type, is likely, but does not necessarily mean, that the plastic came from the particular meal that formed the pellet i.e. products could be retained in the gizzard following one meal to be regurgitated in the next" plastic particles (n=31) were discovered in 17 pellets (2.8% of all pellets; four of Fulmar-type, three auk, three gull/tern, six fish and two mixed). In all but Fulmar-type pellets there was one plastic particle per pellet which rose to, on average, three particles per pellet for Fulmar-type. Modelling across all categories (Generalised Linear Model, GLM) confirmed that Fulmar-type pellets contribute a greater proportion of pellets with plastic than do fish-type pellets (GLM, $p<0.001$).

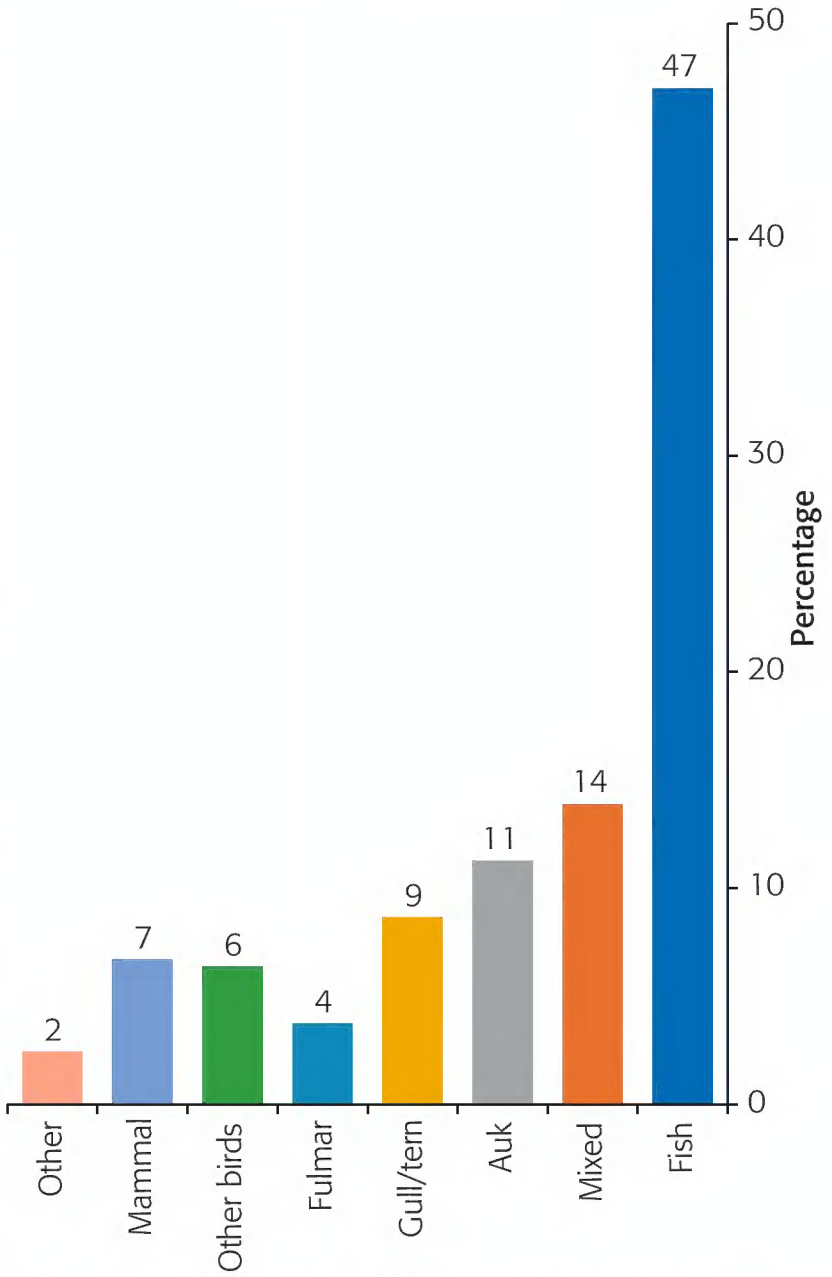

Figure 2. Categorisation of Great Skua pellets from Fair Isle following dissection and analysis. n=number of pellets.

Considering plastic further, all but two particles were either micro or meso in size with equal frequency. No nano particles were seen (using x45 magnification). Bird pellets, by total weight, contained 0.41 g of plastic, with 0.28 g of this represented within the Fulmar-type pellets. All fish-type pellets by contrast only contained 0.17 g. By colour most plastic particles were white (48%) followed by blue (16%) and green (13%) with white being the commonest colour plastic found in both fish-type (57%) and Fulmar-type pellets (67%) (Figure 3). Of plastic types (determined by attenuated total reflectance infrared spectroscopy collected on beamline B22 at Diamond Light Source Limited), low-density polyethylene (the classic single-use form) was most prevalent, making up 24 of the 31 fragments discovered. This type, together with polypropylene, are of low density, and float on the ocean surface increasing the exposure of surface feeding birds to these contaminants. The only high-density particle, polystyrene, was found in the bird pellet with auk remains; consistent with this bird consuming this particle at or from depth, or it being inside a benthic fish eaten by the auk.

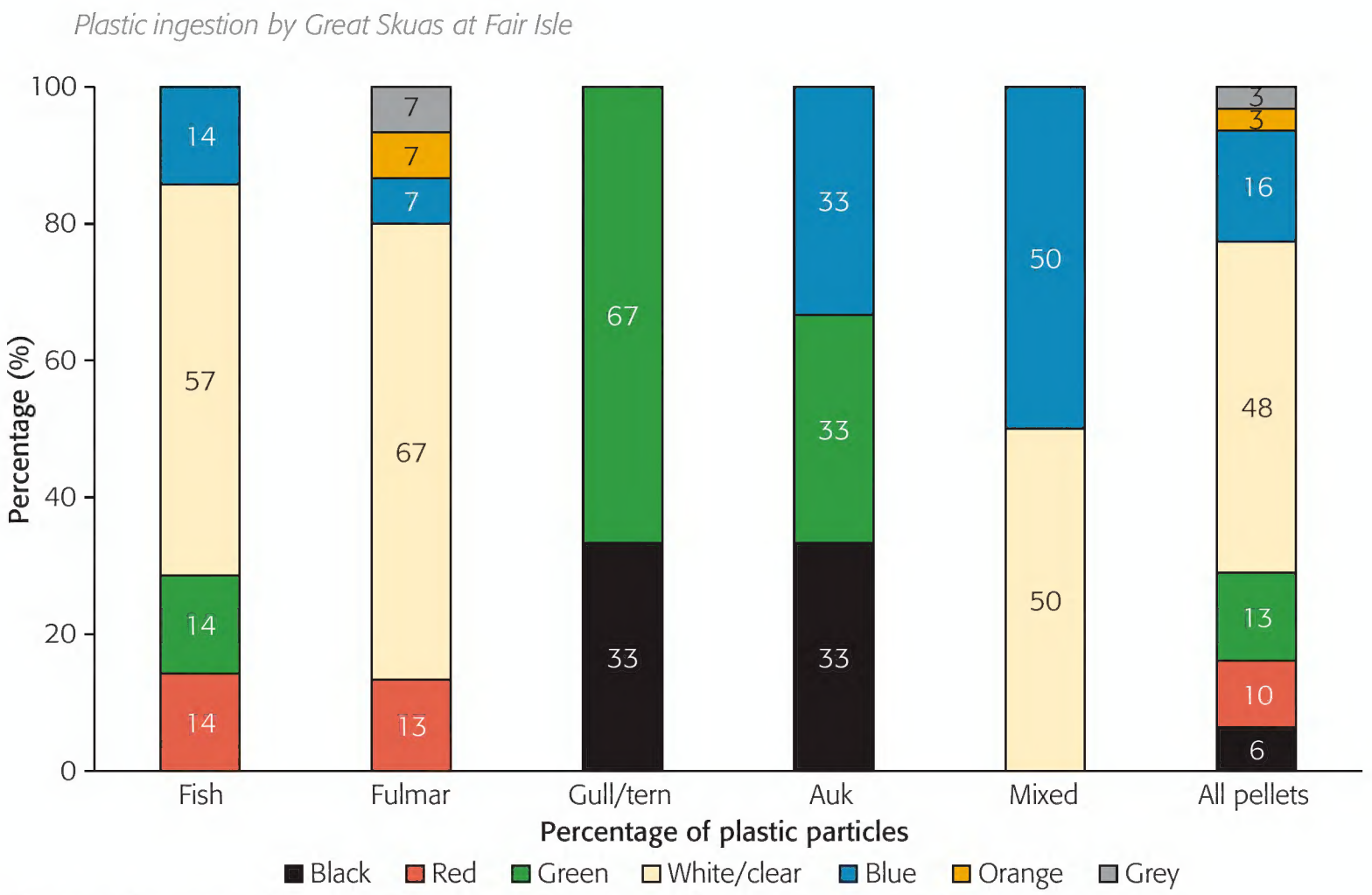

Figure 3. Percentage of colours of plastic found in dissected Great Skua pellets from Fair Isle, 2018.

We are making an assumption that all plastic particles found within collected Great Skua pellets are a consequence of secondary ingestion of prey species. There is no way of proving this (Provencher *et al.* 2017) and indeed Furness (1987), observing Great Skuas in Shetland, suggested that the skuas may be at risk of direct plastic ingestion due to their 'try and eat anything' feeding procedure should plastic sources be available to them. As our findings of plastic contaminant levels around Fair Isle are low it is reasonable to assume that Great Skuas have acquired their regurgitated plastics from species that have concentrated it further.

Fulmars feed exclusively from the ocean surface (van Franeker & Law 2015), with an omnivorous and opportunistic diet (Hamer *et al.* 1997), while gulls and terns are generalist surface feeders (Tavares *et al.* 2017) able to forage in other marine zones. Additionally, terns are described as 'surface plungers' (Safina *et al.* 1990) suggesting food sources can be derived from depth as well as the ocean surface. Auks, in general, are 'pursuit divers' by foraging technique (Anderson *et al.* 2014), which will reduce their vulnerability to (surface) plastic ingestion. It has long been known that procellariiform seabirds such as Fulmars tend to have more plastic in their stomachs than found in charadriiform seabirds (gulls, terns, auks) (Bourne 1976), and this may relate to differences in their stomach anatomy; procellariiforms have a narrowing between the proventriculus and gizzard that probably makes regurgitating gizzard contents difficult whereas charadriiforms do not and so can regularly cast up pellets of indigestible material (Furness 1985).

The findings from our dissected pellets and the amount of plastic associated with pellet type is in line with these feeding strategies and anatomical constraints. Fulmar-type pellets harboured the highest plastic proportion, which was significantly greater than pellets containing predominantly gull/tern or auk remains, or fish, in keeping with Great Skuas deriving ingested plastic from secondary sources. Our findings regarding the proportions of plastic type (polyethylene /polypropylene) and plastic colour (white) are in keeping with other marine studies (van Franeker *et al.* 2011a, Hammer *et al.* 2016b) with both being the consequence of greater production and use, and the commonest colour; but not excluding the possibility that white plastics may be more attractive to marine organisms (Ory *et al.* 2017).

Low-density plastics floating on the ocean surface have been found to be more vulnerable to ultraviolet degradation than those that sink (Moore 2008). These plastics will eventually reach nano scales, potentially entering the food chain at all sizes in between. Moreover, as these particles increase in number, they also increase in total surface area causing a biomagnification of the toxic chemicals they accumulate on their surfaces (Thevenon *et al.* 2014). Thus, seabirds run a dual risk of not only physical damage or intestinal blockage via large particles but also of slow poisoning by the chemicals collected on/leached from the plastic surfaces (Seltenrich 2015).

A study of Great Skua pellets undertaken on Fair Isle between 1996 and 2003 (Votier *et al.* 2007) unfortunately did not address plastic consumption. In the 1960s, less than 5% of seabirds' stomachs contained plastics, by 2010 this had grown to 80% (Wilcox *et al.* 2015). Furness (1985) found plastic in the stomachs of all dead adult Fulmars sampled on Foula, Shetland in 1983, with the most contaminated bird having 40 plastic particles in its gizzard, so this contamination has been around for some decades. Church *et al.* (2018), analysing over 20,000 Great Skua pellets from birds on Foula (between 1973 and 2017), was able to demonstrate a change in the diet of Great Skuas whereby not only had their dietary fish intake changed over this time from sandeels *Ammodytes* sp. to white fish but that from virtually no dietary avian prey species in the 1970s, birds constituted up to up 20% of dietary intake in the 2010s. Furthermore, early Kittiwake *Rissa tridactyla* consumption had been replaced by auks and Fulmars.

Hammer *et al.* (2016b), studying Great Skuas in the Faroe Islands (c.62°00'N 06°47'W, c.370 km NW of Fair Isle), reported greater levels of plastic in Fulmar-type pellets than any other type. Additionally, a greater proportion of pellets contained plastic (64% compared to our 30%) with also double the particle levels per pellet. This emphasises the importance of appreciating the trophic level at which Great Skuas accumulate plastic; the diet of Faroese Great Skuas has a greater proportion of birds (Furness 1987) while Shetland Great Skuas favour a fish diet (Furness 1987, Votier *et al.* 2001). Because of these differences, Faroese Great Skuas have a greater exposure to large plastic loads and bioaccumulation of pollutants. Anthropogenic effects, as one would expect, also bring greater levels of plastic exposure. Beached Fulmars around Scottish islands were found to have an average of 18.9 plastic particles of a combined weight of 0.3 g per bird (van Franeker *et al.* 2011b). Moving north, incidences with plastic decrease as one moves away from areas of human habitation; unless contact with shipping lanes occurs, when it increases again (Humphries & Huettmann 2014, Trevail *et al.* 2015). The implementation of the European Union fishery discard ban, reported in 2013 implemented in 2019, is likely to increase exposure of Great Skuas to plastics as birds are forced towards a greater seabird diet (Bicknell *et al.* 2013).

Plastic pollution levels around Fair Isle, as assessed by regurgitated Great Skua pellet analysis, are low. Ocean currents, lack of major shipping lanes and reduced levels of human habitation all assist in keeping it low. However, increasing ocean pollution and human habitation, with changes to fisheries policy will all contribute to greater exposure. Regular sampling of Great Skua pellets will provide a crude indication of changes, but it is only a small measure of the damage being wrought on environment and seabird health. Much more intensive work needs to address consumption and retention of smaller, more toxic, particles and the sub-lethal alterations these may have on morbidity, mortality, fertility, and population dynamics.

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Plate 247. A male Pied Flycatcher, Teign Valley, Dartmoor, Devon, June 2015. © *Tom Wallis*

Long-term changes in the time of breeding and nest losses of Pied Flycatchers and Redstarts at Loch Katrine, Upper Forth, 1975 to 2002

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The breeding biology of Pied Flycatchers and Redstarts was studied from 1975 to 2002 in wooden nest boxes deployed in oak woodland on the north side of Loch Katrine, Upper Forth. The averages for the annual mean first-egg dates were 22 May for Pied Flycatchers and 20 May for Redstarts. Both species showed a trend for earlier breeding, matching the trend for springs becoming warmer, as recorded locally. The relationships between first-egg dates and early May (1–15 May) temperatures remained after detrending the time-series and examination of residual values. The average date of laying of the first egg was 5.5 days earlier for Pied Flycatchers in the five years 1998–2002 compared to 1975–79, and 8.8 days earlier for Redstarts. The mean clutch size was 6.60 eggs for Pied Flycatchers and 6.34 eggs for Redstarts, and there were no trends over time. Similarly, the mean annual brood size showed no trends for the two species. The averages for the annual mean brood size from first breeding attempts were 5.55 and 5.75 for Pied Flycatchers and Redstarts respectively. Redstarts that had a second breeding attempt had smaller clutch and brood sizes. For most of the study period, the percentage of nests that failed to produce well-grown chicks varied around 11% for both species. This percentage increased markedly (to around 35%) by 1999–2002, due to high levels of desertion, and particularly predation of Pied Flycatcher nests.

Introduction

The Pied Flycatcher *Ficedula hypoleuca* (Plates 247 and 248) and Redstart *Phoenicurus phoenicurus* (Plate 249) have widespread breeding distributions in Europe, occurring in broadleaf and conifer woodland from Spain in the south to Fennoscandia and Russia in the north and east (Cramp 1988, Cramp & Simmons 1993). Their populations were large in *c.* 2000, numbering 12–20 million pairs of Pied Flycatchers and 6.8–16 million pairs of Redstarts in Europe (BirdLife International 2004). However, there is concern about declines in Pied Flycatcher numbers across Europe (Pan-European Common Bird Monitoring Scheme 2019) and it is now Amber-listed in the UK (Eaton *et al.* 2015). Although the status of the Redstart is more favourable, there was a large decline in Redstart numbers during 1970–90 across western Europe (BirdLife International 2004) and in selected woods in Britain between the mid-1980s and 2003–04 (Amar *et al.* 2006).

Both species are long-distance migrants that spend the northern winter in sub-Saharan Africa. Pied Flycatchers occur in the Guinea Savannah forest zone and Redstarts in the dryer Sahel zone (Kristensen *et al.* 2013, Ouwehand *et al.* 2016) where droughts have been implicated in the decline in Redstart numbers (Zwarts *et al.* 2009).

In the British Isles, Wales is the stronghold for both the Pied Flycatcher and Redstart. Both species are also common in south-west and north-west England, but the Pied Flycatcher is uncommon in Scotland, being restricted to southern Scotland, whereas the Redstart occurs throughout the Highlands (Gibbons *et al.* 1993, Balmer *et al.* 2013). The first record of a Pied Flycatcher breeding in Perthshire was in 1950 (Mackenzie 1957), and in 1954 for the Loch Lomond/Trossachs area (Upper Forth).

The lack of old-growth woodland in Britain, partly due to coppice history (Burgess 2014), means that nest sites in the form of rot holes in old trees are limited, so that birds such as tits, flycatchers and Redstarts readily adopt nest boxes as nest sites. This behaviour makes it relatively easy to carry out studies of their breeding biology (e.g. Campbell 1955, Lack 1966, Järvinen 1978, Lundberg & Alatalo 1992, Nyholm 2011, Schölin & Källander 2011).

In April 1973, ten nest boxes were deployed in Sessile Oak *Quercus petraea* woodland on the north side of Loch Katrine to encourage breeding, and this led to the first breeding record of Pied Flycatchers in that year. The population increased as more boxes were deployed. In addition, an increasing number of Redstarts used the boxes. This led to a long-term study of both species, which we report on here. We focus on aspects of breeding success, given declines in the population sizes of both species, thereby extending studies that have been carried out elsewhere in Britain (Goodenough *et al.* 2009, Burgess 2014). We also describe other basic aspects of their breeding biology (first-egg dates and clutch and brood sizes), and investigate these in relation to major changes in the environment: climate and predation (Gibbons *et al.* 2007, Pearce-Higgins & Green 2014).

Plate 248. A female Pied Flycatcher at the entrance to a nest box, Teign Valley, Dartmoor, Devon, June 2015. © *Tom Wallis*

Plate 249. A male Redstart. Abernethy Forest, Highland, May 2015. © *Ron Summers*

Methods

Study area

The study was carried out along the north side of Loch Katrine in sections of oak woodland: east and west of Brenachoile Lodge, west of Strone, on the lower slopes of Meall Dearg and opposite Port na Lich (Plates 250 and 251).

Field work

Untreated softwood nest boxes with a hole diameter of 30 mm were attached to the trunks of oaks 2.5–3.5 m from the ground. Boxes were initially sited *c.*60 m apart to minimise the number of boxes within a potential Pied Flycatcher territory.

Nest box entrance holes were blocked with corks to prevent tits occupying boxes prior to the arrival of Pied Flycatchers and Redstarts. The corks were removed at the end of April each year, thereby allowing any species to access the boxes from this date. Nest box checks were carried out at approximately weekly intervals during the breeding season to record the laying date of the first egg, and the number of eggs and chicks, the latter often determined at ringing. The date of the first egg was determined when nests were visited during egg laying, in which case the number of eggs minus one was subtracted from the date of visit, with both species assumed to lay one egg per day (Cramp 1988, Cramp & Simmons 1993).

Female Pied Flycatchers were lifted off their clutches when incubation was well underway. This allowed them to be ringed, or to record the ring number if already ringed. Males were caught in the nest box when feeding young that were at least one week old. Female Redstarts were also lifted off nests, but it was not possible to catch males. Chicks were ringed with uniquely numbered BTO rings when large enough (from seven days old).

Plate 250. Oak woodland along the north shore of Loch Katrine, Upper Forth, where breeding Pied Flycatchers and Redstarts were studied by Henry Robb, July 2018. © *Ron Summers*

Plate 251. Breeding habitat of Pied Flycatchers and Redstarts at Loch Katrine, Upper Forth, July 2018. © *Ron Summers*

Second attempts at breeding will influence the apparent mean date of laying of first clutches if not distinguished and removed from the data set. However, attempts to rear a second brood after the fledging of a first brood are rare for Pied Flycatchers and Redstarts (Both *et al.* 2019). Nevertheless, to account for potential second attempts, all nests were assumed to be a first clutch unless the clutch was initiated in the same or a neighbouring box after a clutch or brood had failed, the clutch was laid more than 30 days after the first-egg date for that species in that year, or the identity of the female (from its ring number) indicated a second clutch.

Clutch size (a complete egg set) referred to the number of eggs observed after the laying period, or when the number was the same at two visits. Cases of 'egg dumping', where a single egg was laid in an incomplete nest or even empty box, were excluded. Brood size was taken as the number of live chicks at the day of ringing, around 7–10 days old.

A clutch was deemed to have been deserted if the eggs were cold over two visits, and there was no sign of disturbance to the nest. Likewise, if all chicks were found dead in the nest, they were deemed to have been deserted. However, if the nest box had been damaged with the entrance hole enlarged, or the lid pulled off, it was assumed that the clutch or brood had been predated.

At the end of each breeding season, most boxes were cleaned out to reduce the flea burden. The following flea species were recorded: *Dasypsyllus gallinulae* and *Ceratophyllus gallinae* (Robb 1975).

Statistical analysis

We focussed on the period 1975–2002. There were data prior to 1975 and after 2002, but the sample sizes were small, making the mean values less representative.

Trends in time of nesting, clutch and brood size, nest survival and predation rate were examined using Spearman rank correlation analysis. The relationship between time of nesting (laying of the first egg for first clutches) and an index of spring temperatures was examined using Pearson correlation analysis. Similarly, the relationship between the percentage of deserted nests and frequency of heavy rainfall (over or equal to 5 mm per day) in June and total rainfall in the 20 days following the onset of incubation each year was examined using Pearson correlation analyses.

When two time-series are compared in a regression analysis, there is a possibility that a spurious relationship is found if both variables are showing trends (either similar or opposite) across time. The two variables may appear to be related to one another when they may be related to something else. This is known as confounding. To check for confounding, the changes in time of nesting Pied Flycatchers and Redstarts and temperature data were detrended by first carrying out linear

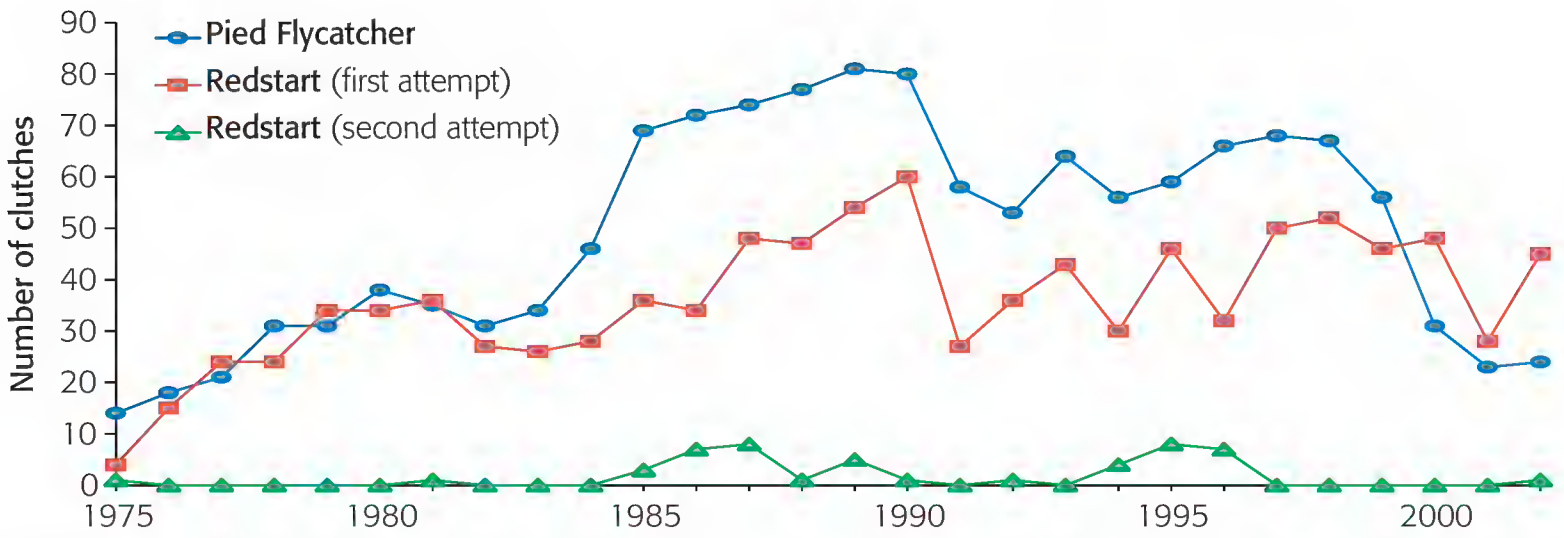

Figure 1. Numbers of breeding attempts by Pied Flycatchers and Redstarts studied in nest boxes each year at Loch Katrine from 1975 to 2002.

regression analysis on each time-series (first-egg dates and mean early May [1–15 May] temperatures). Residuals (the difference between the actual observations each year and that predicted from the regression equation) were then compared in a further linear regression to see if the relationships between first-egg dates and temperature still held. This is a more certain way of determining the relationship between two variables that show trends (Iler *et al.* 2017).

Temperature and rainfall data were obtained from climatological stations within 40 km of the study area. Temperature data were obtained from Benmore Younger Botanic Gardens (56.03° N, 4.98° W; 12 m ASL). Rainfall was recorded at Glenfinglas Dam (56.24° N, 4.37° W; 158 m ASL). Missing values from these in 1994 and 2002 were replaced by values obtained from Benmore Younger Botanic Gardens and Sloy (56.25° N, 4.71° W; 12 m ASL) respectively.

Results

In 1973, ten nest boxes were deployed, and this increased steadily to 207 by 1981. The number of nesting attempts of Pied Flycatchers was one in 1973, rising to a peak of 81 in 1989 (Figure 1). Thereafter, the number declined such that only 24 nesting attempts were made in 2002. There was a similar pattern for Redstarts in that the number of nests with clutches rose initially from two in 1974 and reached a peak of 60 in 1990. However, the decline thereafter was not so steep, and 45 nesting attempts were made in 2002 (Figure 1).

The annual mean date of first eggs for Pied Flycatchers ranged from 15 May to 3 June, and the overall average was 22 May (sd = 4 days, n = 28). There was a tendency for dates to become earlier over the study period (r_S = -0.46, P <0.02, n = 28) (Figure 2). For Redstarts, the annual mean date of first eggs

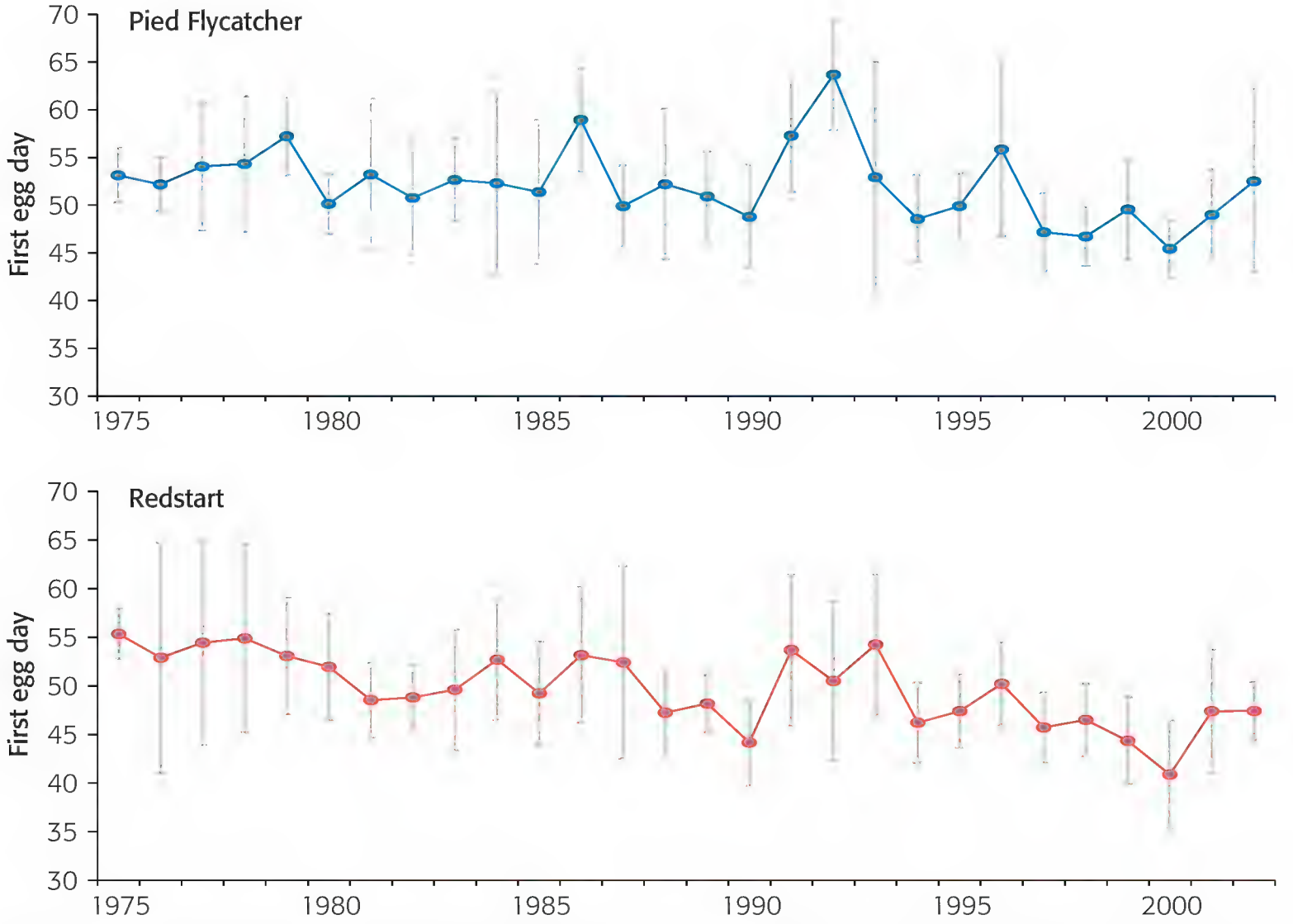

Figure 2. Annual mean first-egg days for Pied Flycatchers and Redstarts nesting at Loch Katrine from 1975–2002. Day 1 = 1 April. Vertical lines show standard deviations.

ranged from 11 to 25 May, and the overall average was 20 May (sd = 4 days, n = 28). There was also a tendency for dates to become earlier over the study period (r_S = -0.69, P <0.001, n = 28) (Figure 2). This meant that that the average date of the first egg was 5.5 days earlier for Pied Flycatchers in the five years 1998–2002 compared to 1975–79. For Redstarts the difference was 8.8 days earlier.

These trends for earlier laying matched the trend for springs (early May) becoming warmer between 1975 and 2002 (r_S = 0.49, P <0.01, n = 28). The mean for the average early May temperature was 8.3°C for 1975–79 and 11.3°C for 1998–2002. There was no trend for rainfall (r_S = -0.05, P >0.5). Thus, for both species, there was a significant negative relationship between mean first-egg days and the mean temperature during 1–15 May (r = -0.56, P <0.01 for Pied Flycatchers and r = -0.68, P <0.001 for Redstarts, n = 28); laying was earlier in the warmer springs (Figure 3).

To further test the relationships between first-egg days and the early May temperature, the time-series were detrended and residuals for first-egg days and May temperatures compared. For both species, significant relationships remained with the early May temperatures (r = -0.49, P <0.01 for Pied Flycatchers and r = -0.54, P <0.01 for Redstarts, n = 28) (Figure 3).

Coefficients of variation in the first-egg days did not show trends (r_S = 0.14 for Pied Flycatchers and r_S = -0.20 for Redstarts), indicating that the length of the breeding period did not increase with the trend for earlier nesting. Second nesting attempts (relays after failure of the first attempt) were not found for Pied Flycatcher but 4.7% of Redstarts had a second attempt. There was no trend in the percentage of Redstarts relaying (r_S = 0.03, P >0.5).

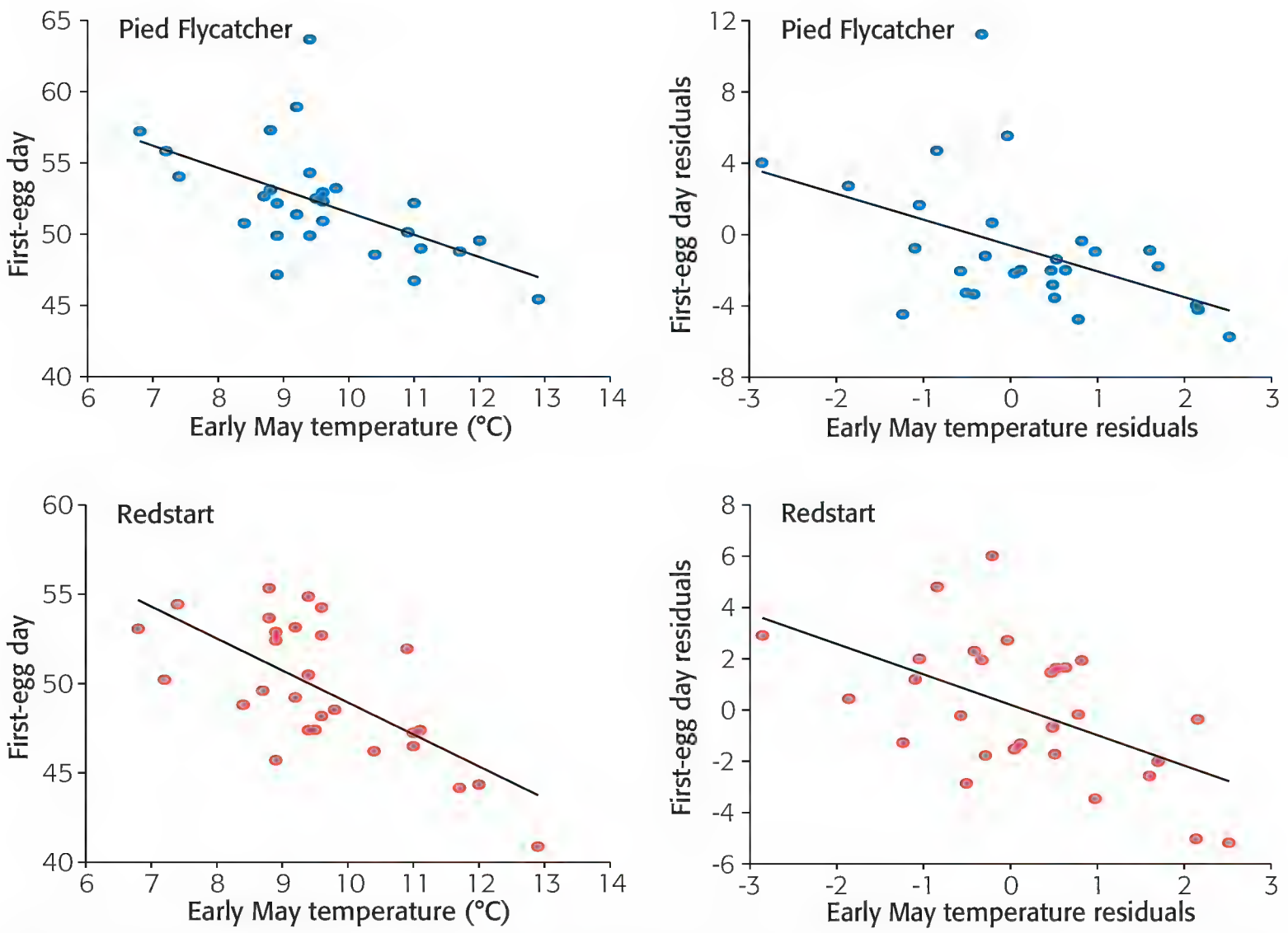

Figure 3. Regular and residual plots of first-egg days for Pied Flycatchers and Redstarts and the mean temperature (degrees C) during 1–15 May for each year at Loch Katrine from 1975–2002. Day 1 = 1 April. The fitted lines are based on simple regressions, and all slopes are significantly different from zero.

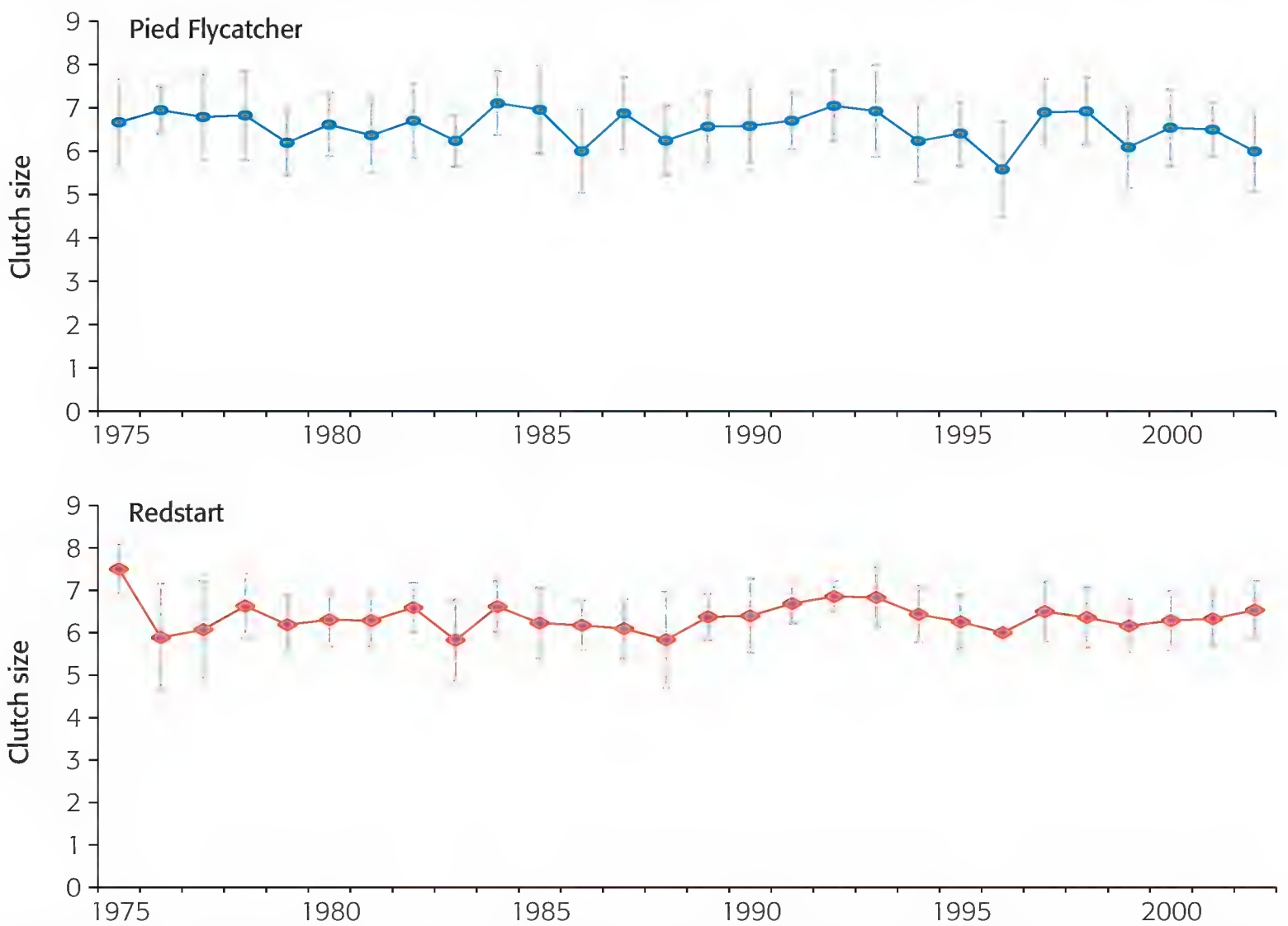

Figure 4. Annual mean clutch sizes for first nesting attempts by Pied Flycatchers and Redstarts nesting at Loch Katrine from 1975–2002. Vertical lines show standard deviations.

Clutch size ranged from three to 10 eggs for Pied Flycatchers and the overall mean was 6.60 (sd = 0.90, n = 1020). The annual mean ranged from 5.58 to 7.11 (Figure 4) and there was no significant trend with year (r_S = -0.26, P >0.1, n = 28). Clutch size ranged from two to eight eggs for Redstarts and the overall means were 6.34 (sd = 0.75, n = 635) for first clutches and 5.04 (sd = 1.22, n = 26) for second clutches. There was a significant difference between first and second clutches (t = 8.41, P <0.001). The annual means ranged from 5.82 to 7.50 for first clutches (Figure 4) and there was no significant trend with year (r_S = 0.11, P >0.5, n = 28).

Brood size at ringing when at least one chick survived ranged from one to nine for Pied Flycatchers and the overall mean was 5.55 (sd = 1.51, n = 1140). The annual mean ranged from 4.00 to 6.27 and there was no significant trend with year (r_S = -0.29, P >0.1, n = 28) (Figure 5). Brood size ranged from one to eight for Redstarts and the overall mean was 5.75 (sd = 1.24, n = 791) for first broods, but significantly smaller (4.23, sd = 1.44, n = 40) for second attempts (t = 7.56, P <0.001). The annual mean ranged from 5.32 to 7.25 for first breeding attempts and there was no significant trend with year (r_S = -0.04, P >0.5, n = 28) (Figure 5).

A varying percentage of nests in which eggs were laid failed to produce chicks that reached ringing age. These varied from 0–23.7% during 1975 to 1998 for Pied Flycatchers, and 0–22.9% for Redstarts (Figure 6). There was no indication that years with higher nest losses for Pied Flycatchers coincided with years with higher nest losses for Redstarts for these years (r = -0.13, P >0.5, n = 24). The respective means for nest failures for 1975–98 were 11.2% and 11.9% for the two species. However, the percentage failure increased markedly during 1999–2002 when the means were 36.0% and 33.5%, respectively (Figure 6). This meant that the breeding success in terms of chicks per nest fell from about 4.94 to 3.55 for Pied Flycatchers for these two time periods. The respective values for Redstarts fell from 5.05 to 3.82.

Figure 5. Annual mean brood sizes for first nesting attempts by Pied Flycatchers and Redstarts nesting at Loch Katrine from 1975–2002. Vertical lines show standard deviations.

Nest failures were due to desertion and predation, with desertion accounting for most failures: 65.3% for Pied Flycatchers and 67.1% for Redstarts (Figure 7). We tested for correlations between the percentage of deserted nests and frequency of wet days in June and also the total rainfall in the 20 days after the start of incubation, but found no significant correlations. Predation accounted for 27.0% of failures of Pied Flycatcher and 25.2% of Redstart nests. There were no significant trends in failure rate attributed to desertion for either Pied Flycatchers (r_S = 0.16, P >0.2) or Redstart (r_S = 0.35, P >0.05), nor to predation for Redstarts (r_S = 0.28, P >0.2),

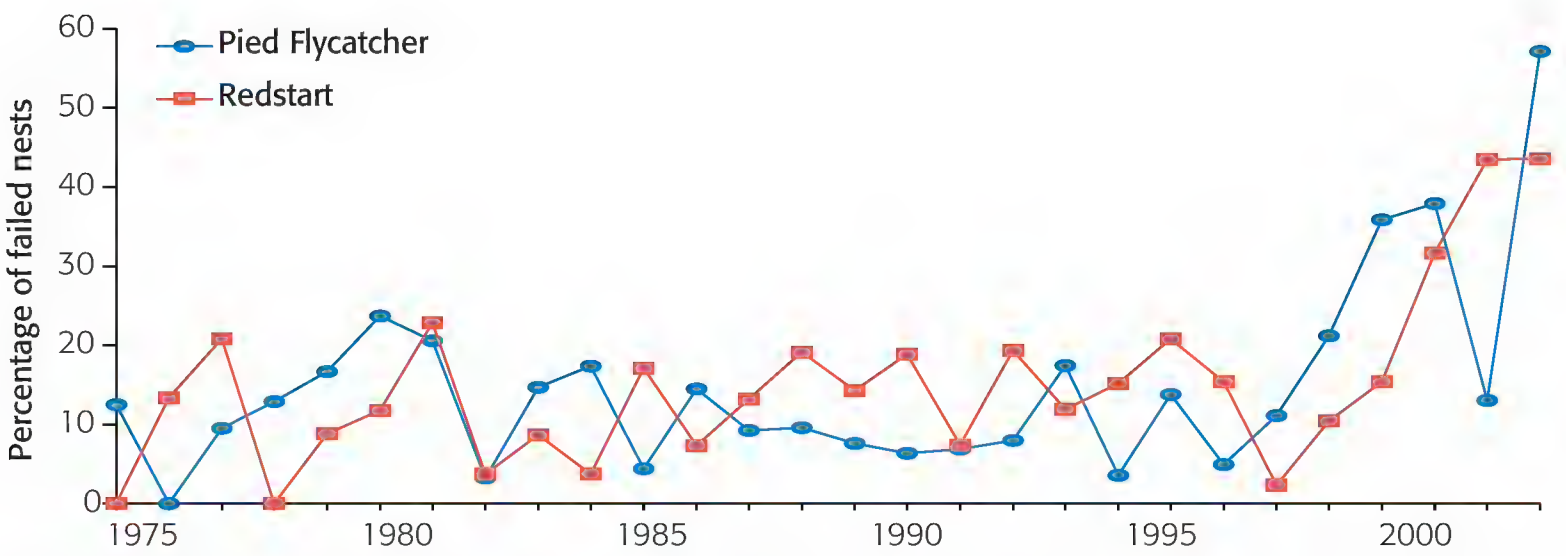

Figure 6. Annual variations in the percentage of Pied Flycatcher and Redstart nests that failed to produce well-grown chicks, from 1975–2002 at Loch Katrine.

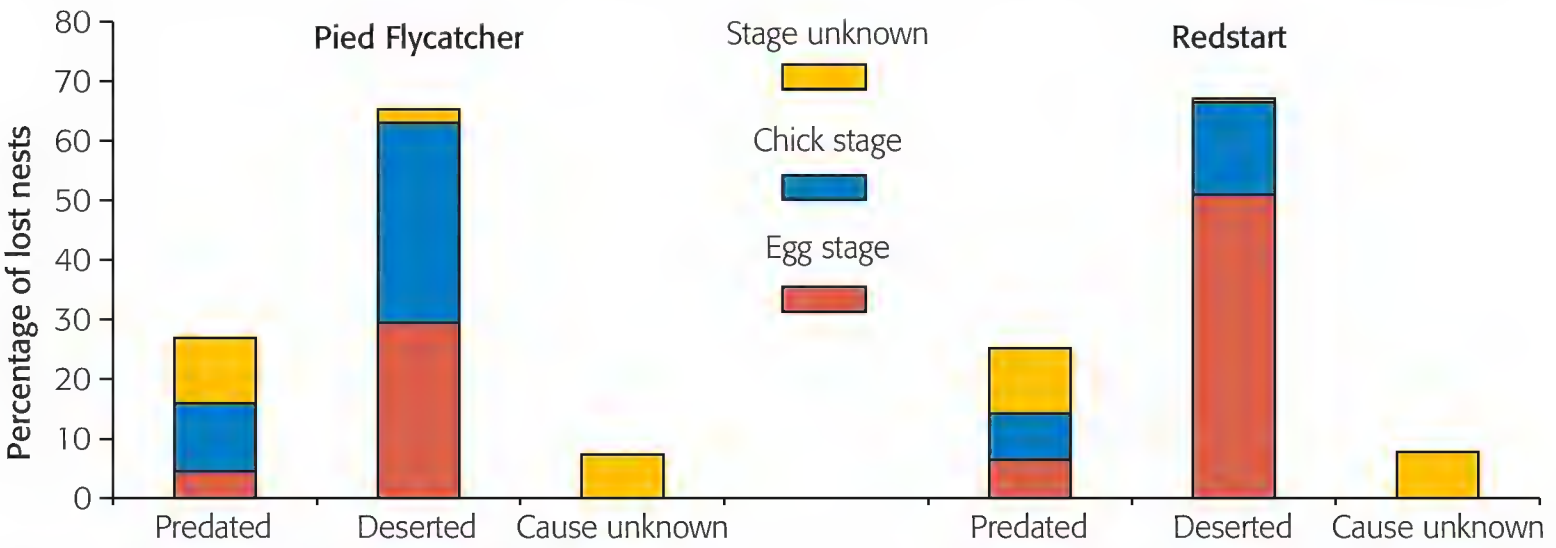

Figure 7. Percentages of causes of nest failure at different stages of the breeding cycle for Pied Flycatchers and Redstarts nesting at Loch Katrine from 1975–2002.

but there was a significant trend for the predation of Pied Flycatcher nests (r_S = 0.42, P <0.05). Three of the years with the highest predation rates for Pied Flycatchers and Redstarts occurred in the last four years (1999–2002).

Discussion

Population trends for Redstarts, if determined by African conditions, would be expected to fluctuate with the long cycles of conditions experienced in the Sahel where they spend the northern winter (Zwarts *et al.* 2009). The higher numbers in the 1980s and in the late 1990s at Loch Katrine broadly correspond with wetter conditions in the Sahel which would benefit the species. Pied Flycatcher nest box occupation rate peaked around 1989, in line with other populations across Britain (Wright *et al.* 2004, Burgess 2014). It is thought this is related to nest box provision which increased markedly through the 1980s (Marchant 1990) with the subsequent cause of the decline unknown, but unrelated to availability of nest sites because the number of nest boxes remained at a high level. The data from Loch Katrine does, however, show how local populations may be affected by predation, in this case, later in the study period.

There were notable trends in the time of breeding of Pied Flycatchers and Redstarts at Loch Katrine. Breeding got progressively earlier across the study period, matching the trend for springs becoming warmer. The pattern of earlier breeding is consistent with the trend for earlier breeding amongst many European breeding birds, including Pied Flycatchers and Redstarts, that is associated with climate change (Crick *et al.* 1997, Porkert *et al.* 2014, Samplonius *et al.* 2018).

Both Pied Flycatchers and Redstarts feed their young high proportions of moth caterpillars during the breeding season (Cholewa & Wesołowski 2011), and as the hatching of moth larvae is regulated by temperature (Buse *et al.* 1999), it is likely that the time of laying by birds is related to temperature through food availability. Thus, as springs become warmer, caterpillars hatch earlier and Pied Flycatchers and Redstarts breed earlier to take advantage of this source of food. The apparent adaptation shown to warming springs could break down if the timing of caterpillar emergence continues to advance. Even for resident birds such as Blue Tits *Cyanistes caeruleus* and Great Tits *Parus major* that can pick up on local cues about food availability before migrants arrive, there can be mismatches between caterpillar availability and optimal timing of breeding (Visser *et al.* 1998). However, in contrast to these tit species, Pied Flycatchers are less reliant on caterpillar prey and rarely time nesting attempts to match the caterpillar food supply to when young have the greatest need (at 10 days old). The time of peak nestling demand for Pied Flycatchers occurs about 12 days later than Blue Tits and Great Tits in Britain (Burgess *et al.* 2018).

Earlier nesting could provide the opportunity for a longer breeding season, increasing the possibility of relaying after failure or having second broods in warmer years (Both *et al.* 2019). However, there was no indication from the coefficients in variation among laying dates or the percentage of second laying amongst Redstarts that there was a trend for an extended breeding season.

In comparison to other aspects of the breeding biology of Pied Flycatchers and Redstarts, the mean clutch size of Pied Flycatchers in our study (6.60) was slightly lower than in England (6.79 in Cumbria and 6.92 in the Forest of Dean) but higher than the continent (6–6.5 in Sweden, 5.5–6.4 in Finland and 5.65–6.29 in Germany) (Lundberg & Alatalo 1992). For Redstarts, the mean clutch size at Loch Katrine (6.34), was close to that for sub-arctic Finland (6.32) (Järvinen 1978) and Finnish Lapland (6.21) (Pulliainen 1977).

Nest losses were mainly due to desertion, but causes were not determined. One possibility is cold and wet weather, which reduced the fledging success of Pied Flycatchers and Redstarts in Finnish Lapland (Pulliainen 1977). However, unlike Burgess (2014) who found a negative effect of May rainfall for Pied Flycatchers, and a positive one for Redstarts, we found no correlation between desertion rates and rainfall at key times of the breeding season.

Direct nest loss due to predators may have been of secondary importance to desertion, but it is possible that clutch desertion could have been triggered by the attention of predators. The identity and relative importance of different nest predators was not determined, but the following potential predators were present at Loch Katrine: Great Spotted Woodpecker *Dendrocopos major*, Grey Squirrel *Sciurus carolinensis*, Weasel *Mustela nivalis,* Stoat *Mustela erminea* and, latterly, the Pine Marten *Martes martes*.

Pine Martens were once hunted by humans for their pelt and regarded as vermin by farmers and gamekeepers (Birks 2002). However, they have recovered much of their former range in Scotland, following legal protection in 1988 and an increase in conifer plantations that provide safe denning sites (Birks 2002, Croose *et al.* 2013). They were first noted in the Loch Lomond area in 1989 when found to be predating Pied Flycatcher, Blue Tit and Great Tit nests at Inversnaid (Trubridge 1993). Martens were able to tear the lid off some boxes to take the chicks and sometimes the adult bird. Otherwise, the contents were pulled through the hole of the nest box. Further, some desertions were suspected to be due to attempted predation. In one year (1990) at Inversnaid, there were 56 occupied nest boxes, of which 25 were predated and 14 deserted after signs of attack (Trubridge 1993). Thus, it is possible that the increase in nest predation at Loch Katrine from 1998 was due to Pine Martens. Elsewhere in Scotland, Pine Martens have been identified as limiting the productivity of Crested Tits *Lophophanes cristatus* breeding in nest boxes at Culbin Forest (Moray). Here, predation also involved removing the lids of nest boxes or pulling chicks and adults through the entrance hole (Taylor *et al.* 2016).

The breeding success of Pied Flycatchers and Redstarts declined in the latter years of the study due to an increase in nest failure. In order to understand the importance of the decline in breeding success to the overall population dynamics of these populations, measures of individual survival, age at first breeding and dispersal need to be taken into account.

The monitoring of Pied Flycatchers and Redstarts at Loch Katrine over 28 years provides valuable information on changes in population size, clutch size and brood size at ringing as a proxy for number fledged. The trends observed at Loch Katrine fit with the patterns observed in other well-studied populations of these species in Britain, with a peak in numbers of pairs of Pied Flycatchers around 1990, no change in clutch size over time and a trend in earlier egg laying in response to a trend for higher spring temperatures. While there are many nest box studies of Pied Flycatchers (Lundberg & Alatalo 1992), the Redstart is not common in nest box schemes in Wales

and England, so the Loch Katrine study provides a valuable insight at Redstart trends over time. Apart from occupancy rate, which is likely to be influenced by events outside the breeding season, Redstart trends followed the same general trends as for Pied Flycatchers, suggesting that trends in laying date, brood size, and more obviously nest loss, are all determined by local factors. The comprehensive ringing data collected for Pied Flycatchers is also of great value and is currently being analysed along with other similar datasets across Britain to examine annual survival rates and how these influence population size.

Acknowledgments

We thank Mr W.T. Devenay, Director of Water, Strathclyde Region and William Orr and Arthur Campbell, superintendents at Loch Katrine for permission for HR to carry out the study. Mr and Mrs James Fraser extended hospitality to HR at Brenachoile Lodge, and Mr Fraser also helped construct nest boxes along with Mr W. Urquhart and Iain Munro. Fellow members of the Tay Ringing Group (Dave Arthur, Norman Atkinson, Alan Barclay, Keith Brockie, Ewan Cameron, Malcolm Chesney, John Clark, Alan Cowan, Peter and Sylvia Kemp, Ron Lawie, Bruce Lynch, Eilidh McNab, Mike Martin, Sandy Mitchell, Steve and Joyce Moyes, Mike Nicoll, Dave Oliver, Derek Robertson and Geoff Shaw) helped with field work and John Mitchell helped with annual reports. We are greatly indebted to Iain Robb who facilitated the transfer of Henry's data to the Tay Ringing Group. Irene Benedicto computerised the data for analysis and Jeremy Wilson commented on the draft. Climatological data were provided by the National Meteorological Library and Archive - Met Office, UK, under Open Government Licence. All data are Crown Copyright.

Postscript

Henry was always keen to publish the results of his nest box study but, sadly, this did not happen during his lifetime. After his death on 10 January 2016, his brother Iain, knowing Henry's passion for ornithology, passed Henry's data and notes to the Tay Ringing Group. Henry had been a member of the group since the early 1970s. This allowed RS and MB to archive the raw data, which were in good order, prepare computer spread-sheets for data analyses and publish this and other planned papers. The data sheets and electronic files are archived with the Tay Ringing Group, and electronic files with the RSPB and SOC.

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Plate 252. Long-tailed Ducks flying into freshwater from the sea, Lairo Water, Shapinsay, Orkney, May 2018. © *Alan J. Leitch*

Use of freshwater by Long-tailed Ducks in Orkney

D. PATTERSON, C. MITCHELL & A.J. LEITCH

Simultaneous observations in late spring 2018 revealed that the majority of Long-tailed Ducks on freshwater sites were asleep, loafing or engaged in comfort activities, whilst the majority of those on the sea were either actively diving/feeding, or just loafing. We suggest that use of freshwater sites during the spring is linked to enhancing body condition ahead of the spring migration and breeding season. Ducks on freshwater were frequently noted drinking immediately upon arrival. Ingesting freshwater may help to reduce internal parasites. Long-tailed Ducks were noted feeding close to fish-farms suggesting that these may act as an attractant. Further studies on the interaction of waterfowl and fish farms are merited.

Introduction

Long-tailed Ducks *Clangula hyemalis* breed on freshwater sites on tundra throughout Arctic regions (Cramp & Simmons 1977, Kear 2005). For the remainder of the year, the ducks are largely marine, regularly feeding in waters at 3–10 m, with depths up to 50–60 m recorded (Schorger 1951). The birds feed by diving to access molluscs, amphipods and fish (Cramp & Simmons 1977). In Scotland, the Long-tailed Duck is a localised, but fairly common winter visitor principally in the Moray Firth, but there are also concentrations around the coasts of Shetland, Orkney, and smaller numbers in the Firth of Forth. Recent surveys suggest that there could be more than 4,000 Long-tailed Ducks using inshore waters around Orkney (Upton *et al.* 2018, Jackson 2018).

In Orkney, there has also been evidence of spring passage, as peak numbers progressively moved to inshore waters and even appeared on freshwater sites. For example, Loch of Tankerness (195 in April 2000), Loch of Ayre (162 in April 2000) and Echna Loch (250 in April & May 2003), with numbers and use varying greatly between years (Forrester *et al.* 2007). Between 700 and 1,000 birds used Echna Loch during early May 2017 (pers. obs.). Birds fly to this freshwater loch from nearby Echnaloch Bay (Echna Sound). In full summer plumage, this is an impressive sight. Most birds depart by mid-May.

In the mid-1960s, Long-tailed Ducks were also observed on Lewis forming pre-migration parties in the spring which indulged in displaying and calling on freshwater (Elkins 1965), however the reason for the use of these and other freshwater sites in northern Scotland is not fully understood (Forrester *et al.* 2007). The present study aimed to describe the behaviour of Long-tailed Ducks on freshwater habitats in Orkney during the spring.

Methods

Observations of Long-tailed Ducks using freshwater took place from 29 April to 3 May 2018. This survey period attempted to coincide with a high proportion of birds using freshwater and was therefore influenced by observations and counts of ducks using Echna Loch in spring 2017. The five-day survey period consisted of mainly fair weather, with no periods of heavy rainfall or strong winds. Therefore, we consider that there were no weather-related differences in behaviour.

In order to directly compare the behaviour of Long-tailed Ducks on both freshwater and marine sites, flock scans were carried out at two locations simultaneously during daylight hours (Figure 1). At 15-minute intervals, total flock size was recorded and then samples within flocks were scanned using either a 20–60x zoom telescope or binoculars. Observations were undertaken every 15 minutes during a period of 14 hours (a minimum of 56 simultaneous scans). Flock scan data were lumped into hour long categories from 06:00 hrs (scans undertaken between 06:00 and 06:45 hrs) through to 19:00 hrs (scans undertaken between 19:00 and 19:45 hrs).

Birds were assigned to a pre-determined behaviour/activity category during these flock scans:

- **Dive (feeding)** - actively diving.
- **Loaf** - not engaged in any other activity, normally just floating on water.
- **Sleep** - a bird with its head resting on its back or tucked under its tertial feathers and adopting a sleeping pose.
- **Comfort** - actively preening, washing or rapidly flapping its wings.
- **Head-dip** - actively dipping its head to the water surface.
- **Alert** - head up and in an alert position.
- **Aggression** - aggressive behaviour towards (or from) another. Species involved noted if not Long-tailed Duck.
- **Courtship** - engaged in courtship behaviour.

Assigned behaviours/activities were recorded either directly into a notebook or into a dictaphone and then transcribed later after playback. The data were then entered into a spreadsheet.

In some cases, when birds were feeding under water, care was needed to wait for birds to surface to correctly assign them to the 'dive' category. In addition, some birds engaged in feeding may have been underwater at the time of the flock scan. Therefore, the true number of birds engaged in diving (feeding) may have been under-reported because of this.

A bird was identified as sleeping when it had its bill tucked under its tertial feathers. This posture was distinct from other behaviours and could easily be determined at a distance. Many birds were seen to use their oil gland during the early stages of preening behaviour. Bathing was included within this preening category, as it also related to feather maintenance, water proofing and body condition.

Activity was expressed as proportions (percentages): the number of birds recorded in each behaviour category divided by the total number of birds assigned to any category multiplied by 100.

The salinity of water samples from the main freshwater lochs used by Long-tailed Ducks was determined using a hand-held salinity meter. The results were expressed in terms of conductivity in µS/cm.

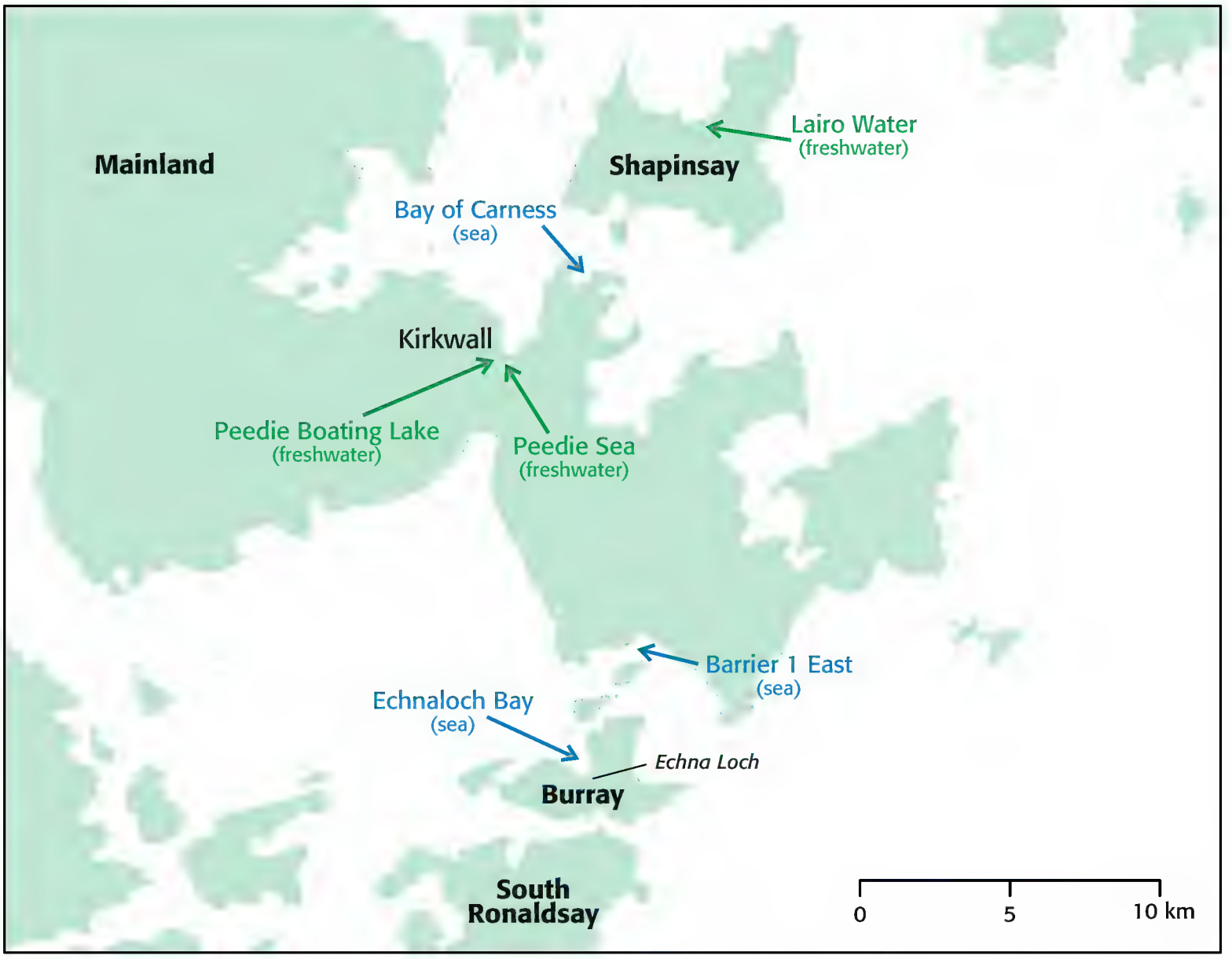

Figure 1. Locations of behavioural observations of Long-tailed Ducks during late spring 2018 on Orkney.

Results

In all, 172 flock scans were undertaken from 29 April to 3 May 2018. The median flock size for each 15-minute flock scan was 55 birds (range 6 to 232 birds). After summing the observations into hour long categories, the median sample size was 319 birds (range 97 to 1,387 birds). However, the number of birds visible, and thus sampled, varied during the day, with the number

Plate 253. Long-tailed Ducks sleeping on freshwater, Peedie Sea, Kirkwall, Orkney, April 2018. © *D. Patterson*

of Long-tailed Ducks using freshwater building in the morning, peaking around midday, and thereafter starting to decline. The number seen on the sea remained fairly constant during the day with a slight increase in the early evening (Figure 2).

On freshwater, the majority of birds were either sleeping (49.7%) or loafing (22.1%) (Table 1, Figure 3). The proportion of birds engaged in comfort activities was 19.2%.

Table 1. The proportion (%) of Long-tailed Ducks engaged in behavioural activities recorded on freshwater sites and at sea in April/May 2018.

Behavioural activity	Freshwater	At sea
Sleep/rest	49.7	0.8
Loaf	22.1	52.2
Comfort (preen/bathe/wing flap)	19.2	7.7
Dive/feed	7.0	37.5
Alert	1.4	0.6
Courtship	0.4	0.6
Aggression	0.2	0.1
Head-dip	0.0	0.1

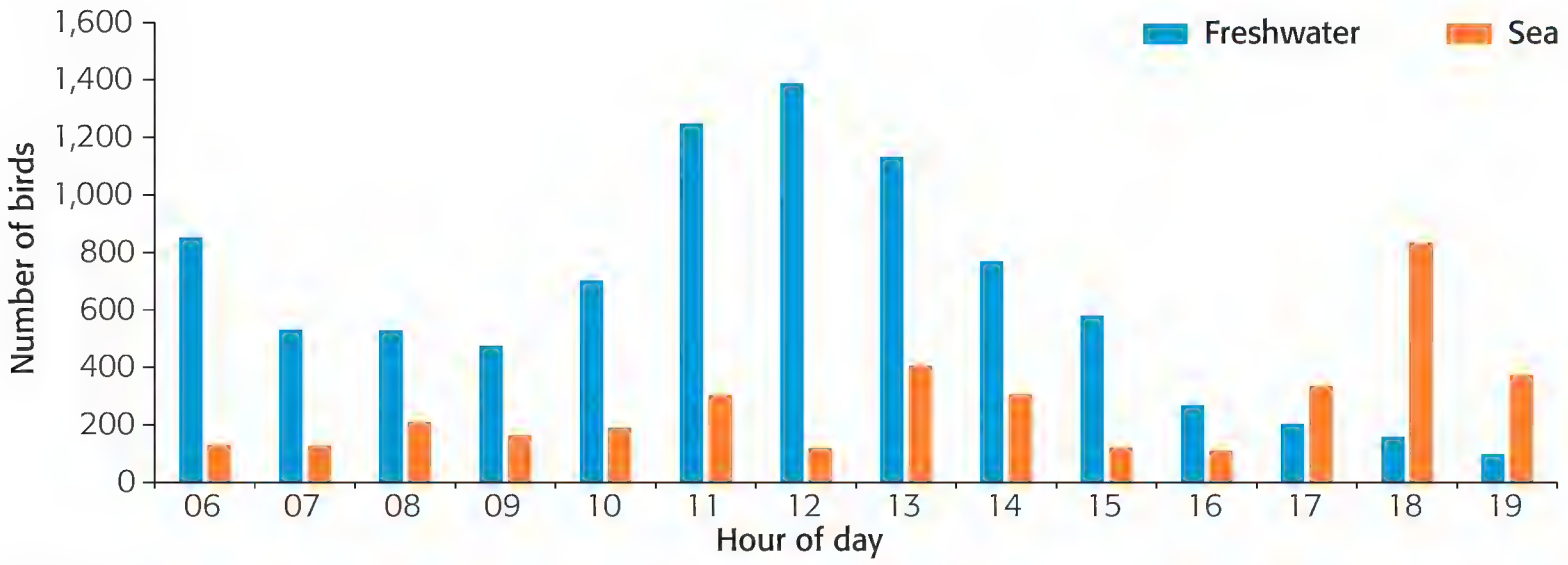

Figure 2. The number of Long-tailed Ducks allocated to behavioural activities recorded on freshwater sites and on the sea on Orkney in April/May 2018.

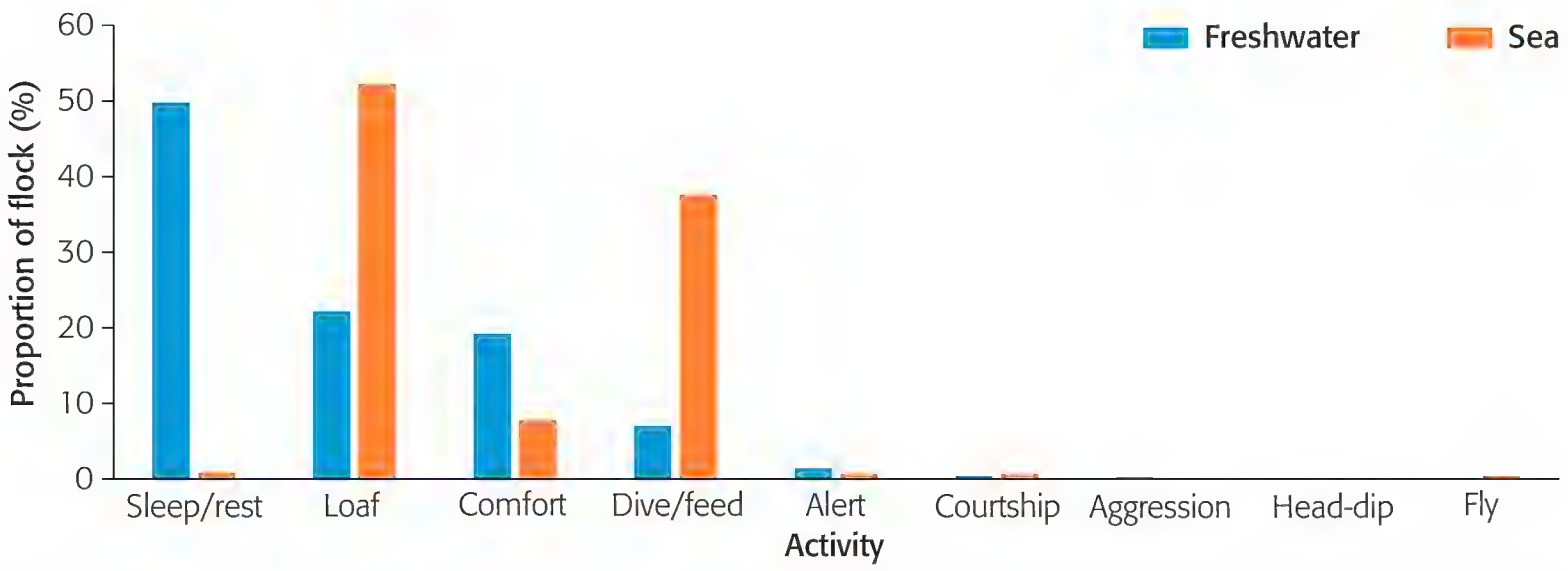

Figure 3. The proportion of Long-tailed Ducks engaged in behavioural activities recorded on freshwater sites (sample size 8,922 birds) and on the sea (sample size 3,712 birds) on Orkney in April/May 2018.

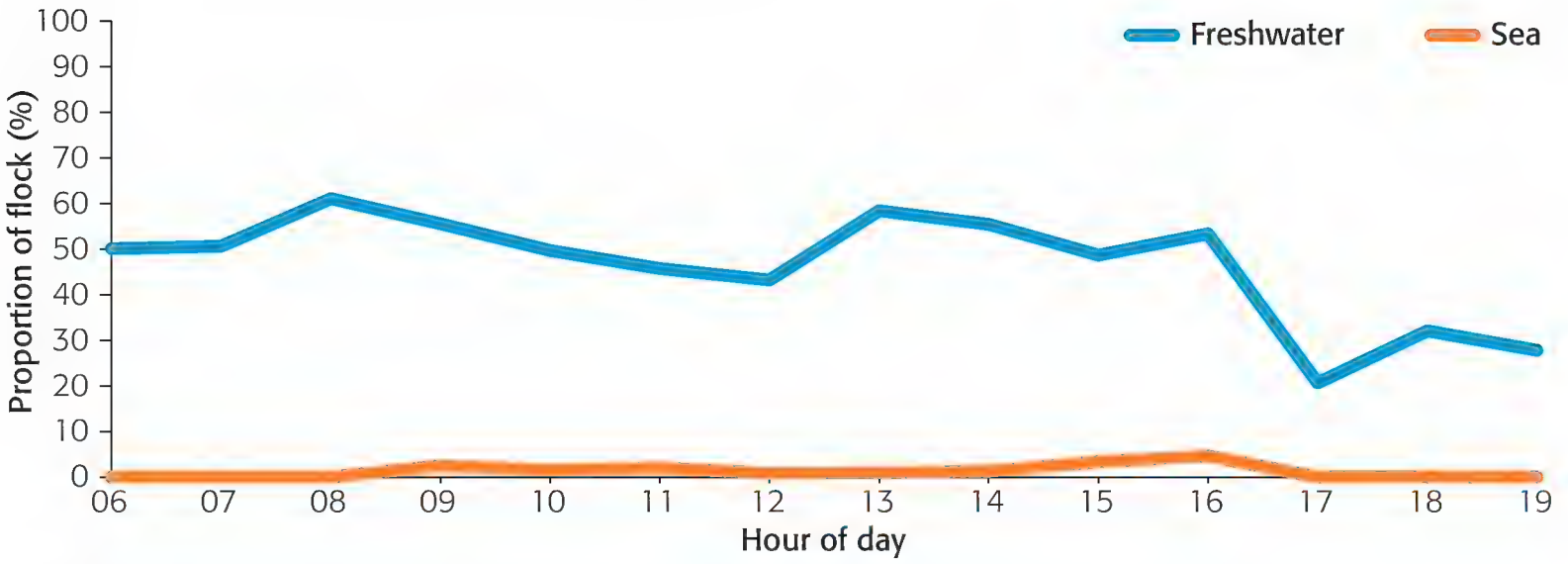

Figure 4. Proportion of Long-tailed Ducks sleeping on freshwater compared to those on the sea.

At sea, the majority of birds were either loafing (52.2%) or diving/feeding (37.5%) (Table 1, Figure 3). The proportion of birds engaged in comfort activities was 7.7% and the proportion asleep was less than 1%.

The pattern of activity showed that throughout daylight hours, Long-tailed Ducks on freshwater spent a greater proportion of time asleep than those at sea (Figure 4).

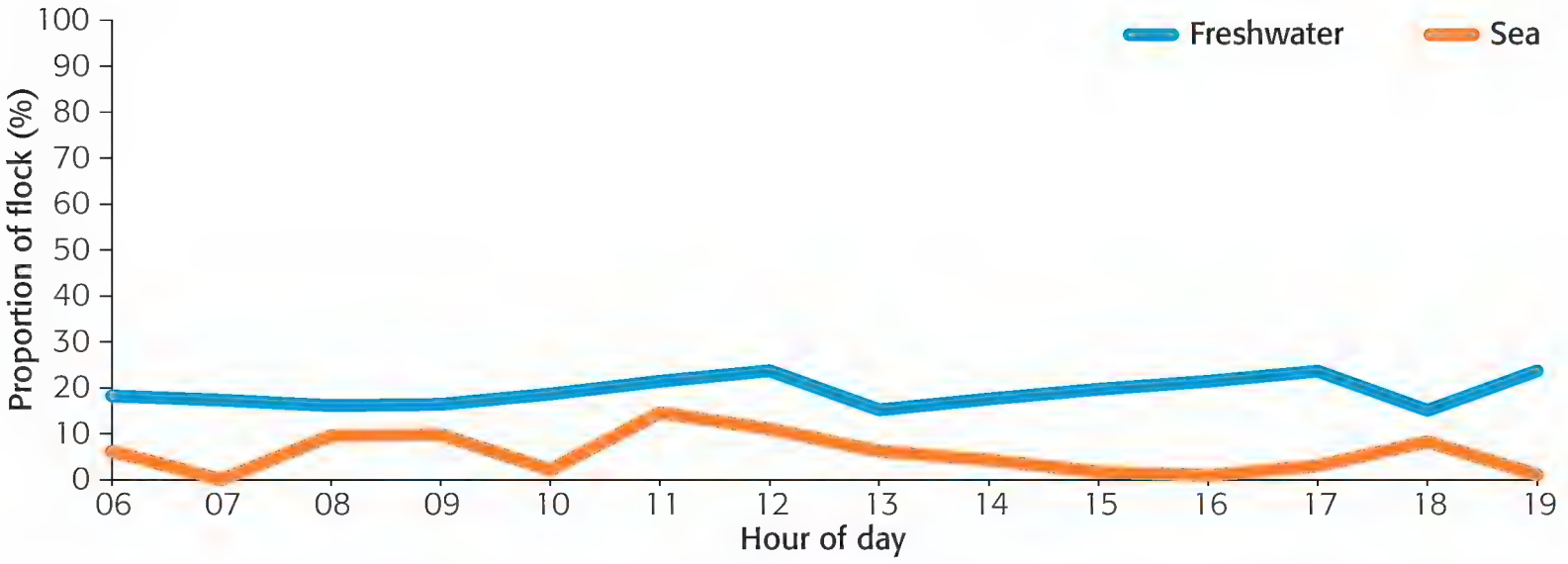

Figure 5. Proportion of Long-tailed Ducks engaged in comfort behaviour on freshwater sites compared to those on the sea.

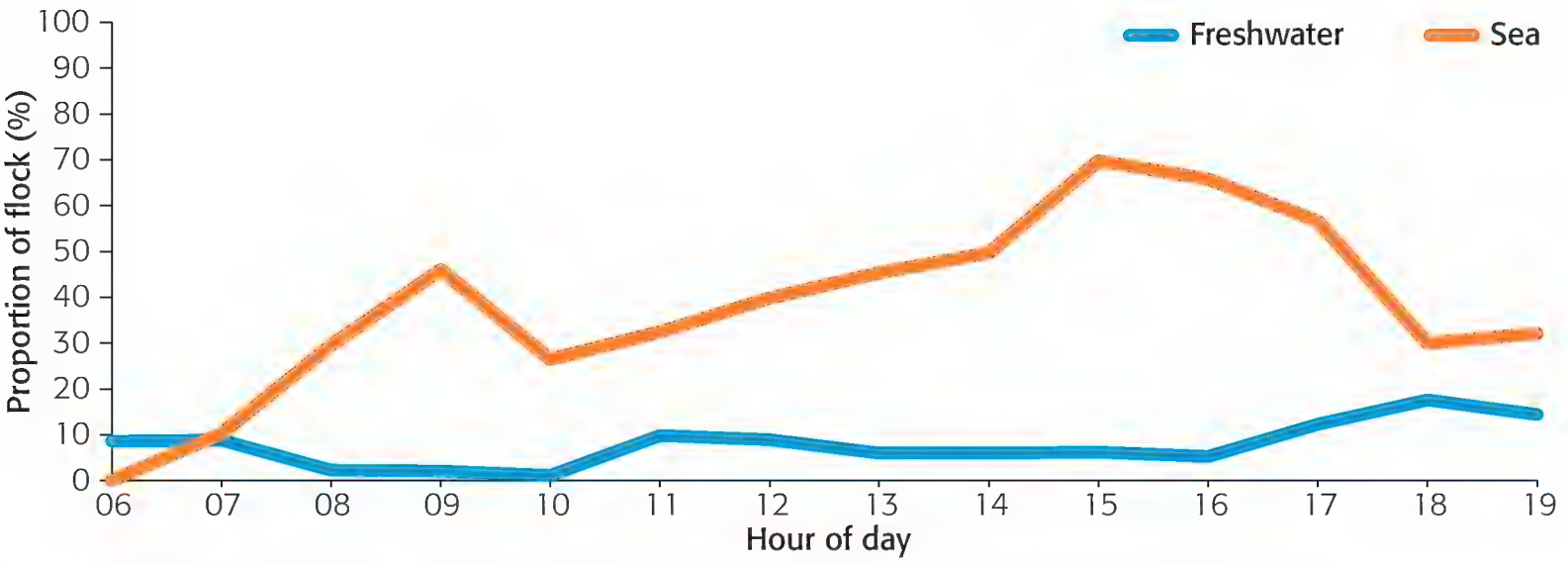

Figure 6. Proportion of Long-tailed Ducks diving (feeding) on freshwater sites compared to those on the sea.

A higher proportion of Long-tailed Ducks engaged in comfort behaviour throughout the day on freshwater sites compared to those on the sea (Figure 5).

A higher proportion of Long-tailed Ducks were diving (feeding) throughout the day on the sea compared to freshwater sites (Figure 6).

Site use

The two main freshwater sites consistently used in spring 2018 that the observers were aware of were Lairo Water (Shapinsay) and Peedie Sea (Kirkwall) (Figure 1). The proximity of these two freshwater sites to the sea (both <100 m) and observed flight-lines of ducks arriving suggested that it was most likely that the Long-tailed Ducks were from North Orkney coastal waters (i.e. north of Kirkwall).

It was unknown if Long-tailed Ducks to the south of Kirkwall visited any freshwater sites, apart from Echna Loch. However, unlike in spring 2017, only small numbers used this loch during daylight hours and those that did only stayed for short periods. It is not known why the large numbers recorded using Echna Loch in spring 2017 (700–1,000 birds) did not use the loch during 2018. Requests to the Orkney Bird Club, RSPB members and on social media for counts of Long-tailed Ducks using spring freshwater sites in 2018 identified only the sites mentioned here.

Plate 254. Over 1,000 Long-tailed Ducks regularly used Lairo Water during spring 2018, Shapinsay, Orkney, May 2018. © *D. Patterson*

High numbers of Long-tailed Ducks regularly visited Lairo Water. The peak normally occurred in the middle of the day, with use declining and becoming more irregular as the day progressed. Smaller numbers (up to 150 birds) were found to be using the Peedie Sea Boating Lake (Kirkwall). This was surprising, as this site is surrounded by people walking, jogging, cycling, dog walking (and dog swimming) and model yachting, etc., yet the Long-tailed Ducks were oblivious to all this potential disturbance.

Salinity of freshwater sites

The freshwater sites favoured most by Long-tailed Ducks in spring 2018 were those with very low salinity: the Peedie Sea lochs and Lairo Water (Table 2), suggesting that the birds were favouring fresh rather than brackish water. Echna Loch on Burray, which held 700–1,000 birds in May 2017 was found to be brackish (420 µS/cm) in spring 2018, although the salinity of the loch in spring 2017 was unknown. A maximum of only 162 birds were counted on this loch in spring 2018, but the birds that landed only stayed for a short time. Perhaps the birds wanted to use Echna Loch but found the water too salty (see Discussion).

Table 2. Salinity values (µS/cm) of freshwater lochs used by Long-tailed Ducks in Orkney (28 April to 5 May 2018).

Freshwater site	Maximum number of Long-tailed Ducks	Sample 1[1]	Sample 2	Mean
Peedie Sea (Kirkwall)	138	4.7	4.5	4.6
Peedie Sea Boating Lake (Kirkwall)	150	5.4	5.7	5.55
Lairo Water (Shapinsay)	1,770	2	2	2
Echna Loch (Burray)	162	420	420	420
Control (seawater)[2]		>1,000	>1,000	>1,000

Notes
[1] Samples were taken several days apart and from different parts of the water body. [2] Sample taken at Echna Sound.

Approximately two-thirds of the Long-tailed Ducks on freshwater sites were either asleep or engaged in comfort activities, whilst of those on the sea, over a third were actively diving/feeding (Table 1 and Figure 4).

Discussion

During flock scans, the category 'loaf' was used to identify a Long-tailed Duck that was not engaged in any other demonstrable activity (i.e. neutral behaviour). The focal bird, at the time of the observation, was simply floating on the water. During flock scans, the time available did not allow observers to follow each bird for greater than 18 seconds to check that it was not resting between active dives. Therefore, some 'loafing' birds may have been resting between active dives and thus the true number of birds engaged in diving (feeding) may have been under-represented. Figure 8 shows the combined proportion of birds engaged in diving (feeding) and loafing and demonstrates the partition in activity between the two. However, equally some birds categorised as 'loafing' may have been simply resting.

A weakness of the study was that observations of the behaviour of the birds could not be undertaken at night and were only undertaken during 14 hours of daylight. It is possible that the behaviour/activities observed could be reversed during periods of darkness. However, our observations indicated that they leave freshwater for the sea progressively into the afternoon and normally before dusk sets in (Figure 2).

Plate 255. A female and male on freshwater on the Peedie Sea, Kirkwall, Orkney, April 2018. © *D. Patterson*

Why is freshwater important in the spring?
During the study, we noted that birds often drank immediately upon arrival on freshwater (usually within the first 20 seconds). As birds often stayed for many hours on freshwater, this suggests that its use has more value to birds than just taking in water.

One possibility might be that Long-tailed Ducks visiting freshwater are intentionally exposing any gut parasites they have to a freshwater environment that may interrupt the natural parasitic cycle (Piersma 1997). Bustness & Galaktionov (1999) found that seabird trematodes (parasitic flatworms) were influenced by human activities (i.e. fishing industry complexes and fish farms) along the sub-arctic Barents Sea coast of northern Norway. Their study found that parasite prevalence within Eiders *Somateria mollissima* was higher at sites with a fishing industry, but the differences with control sites were not found to be significant. During our study, Long-tailed Ducks were regularly counted frequenting sheltered coastal bays where fish farms were also present. Two other independent studies also noted this possible association (Jackson 2018, Upton *et al.* 2018). It is possible, however, that these shallow bays are favoured by this sea-duck irrespective of the fish farms being present. There appear to be few studies (if any) of how Long-tailed Ducks interact with aquaculture in Scotland.

Although not directly relevant to Orkney, Faulkner (2013) studied a growing aquaculture industry in Puget Sound (Washington State, USA) and found that Bufflehead *Bucephala albeola* and scoter *Melanitta* species abundances were positively associated with aquaculture, but only Bufflehead maintained significant positive associations over time. Long-tailed Ducks did not feature in this research work, but it does show that some seaducks may be attracted to aquaculture which in turn may affect parasite levels. Our observations of the distribution and proximity of Long-tailed Ducks (and Eiders) to fish farm infrastructure in Orkney suggests that they may be acting as an attractant. This could be associated with ducks benefitting from the fish feed adjacent to the fish cages or perhaps these seaducks are feeding on small fish or invertebrates attracted to this food. Whatever the reason, our observations suggest a possible association which merits further research.

As a true seaduck outwith the breeding season, Long-tailed Ducks are adapted to living within the marine environment without any apparent dependency on freshwater for drinking or otherwise. However, it is possible that this species may engage in 'plumage drinking' (drinking beading rainwater drops from their plumage), but as yet, this behaviour has either not been noted or, as yet, remains unpublished.

The use of freshwater bodies by Long-tailed Ducks is now a well-documented part of their spring pre-migration cycle in northern parts of Scotland (Elkins 1965, Thom 1986, Forrester *et al.* 2007). In Scottish waters, this species does not appear to use freshwater sites in any great number during other times of the year in normal circumstances (Forrester *et al.* 2007), even though this habitat is available to them. Scaup *Aythya marila* have been observed utilising the mouths of freshwater streams as they flow into the estuary near Inverness in late March/early April, although it is not known if the birds are drinking there (pers. obs.). Elkins (1965) considered that Long-tailed Ducks visited freshwater in the spring on Lewis during periods of cool polar air; similar to that experienced by the birds in the Arctic environment in the summer, when they also use freshwater. Interestingly, he also noted birds were resting on freshwater, which suggests that this behaviour has occurred for many years.

Long-tailed Ducks often remain on freshwater for long periods when they rest (sleep), maintain or improve their body plumage (bathe & preen) thus enhancing individual condition/fitness which may provide benefits through to breeding (Stafford *et al.* 2014). Sheltered freshwater sites may provide Long-tailed Ducks with calm conditions where they can engage in lengthy bouts of preening, such as re-oiling flight feathers. Using sheltered freshwater sites to sleep may save

energy, rather than sleeping on the open sea, with greater wave action and tidal currents. Other wildfowl (e.g. Barnacle Geese *Branta leucopsis* and Whooper Swans *Cygnus cygnus*) have been observed sleeping during the day for protracted periods during and after migration journeys in Scotland (pers. obs.). One study found that sleep was an important factor for Bewick's Swans *Cygnus columbianus bewickii* at a spring staging site (Rees & Bowler 1991).

Recent surveys of Long-tailed Ducks in Orkney have shown that numbers peak in late winter, suggesting passage birds may be staging there. For example, counts in March (4,647), exceeded other core winter months (Upton *et al.* 2018, Jackson 2018). However, these surveys did not extend into the main spring months of April and May. Nevertheless, it is acknowledged that there is considerable anecdotal evidence to suggest that peak numbers can be even higher in Orkney during April–May (Upton *et al.* 2018).

Plate 256. Long-tailed ducks oblivious to everyday human activities, Peedie Sea, Kirkwall, Orkney, May 2018. © *D. Patterson*

Using freshwater sites prior to spring migration may not involve all Long-tailed Ducks in Scotland. Spring use of freshwater by large numbers of Long-tailed Duck has not been recorded in Sweden, for example (L. Nilsson pers. comm.). Though some late Long-tailed Ducks may still be found further south in the spring (e.g. outer Dornoch Firth, Highland), there is no indication that freshwater sites are visited there (pers. obs., Highland Bird Report 2016).

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Revised ms accepted August 2019

John Mitchell (1934–2019)

Plate 257. John Mitchell outside the Chequered Skipper pub, Oundle, Peterborough, July 1976. © *Neil Mitchell*

Located at the south-eastern corner of Loch Lomond, where the River Endrick enters the loch, lies the Loch Lomond National Nature Reserve, now owned by the RSPB. This beautiful area was the domain of John Mitchell who was reserve warden/senior warden for over 27 years from the 1960s. He loved this area and spent most of his time getting to know his patch intimately. He had no equal in his knowledge of both its natural history and human history and was always very happy to share this, knowledge both in print and by lecture or in conversation.

John was born in Peterborough, Lincolnshire on 15 January 1934 into a talented family of musicians so it wasn't totally unexpected when he took up music, becoming an accomplished trombonist and double bass player with various bands. During the early 1950s, he was conscripted into the army in North Yorkshire where he joined the staff band of the Royal Corps of Signals. There, he came under the influence of the late Derek Ratcliffe, a sergeant who was looking for like-minded recruits to join a Catterick Field Club. John jumped at the chance to increase his knowledge of ornithology, botany and *Lepidoptera* and they became life-long friends.

By the early 1960s, John was a performing musician in Glasgow and Loch Lomondside hotels, meeting, courting and marrying Sandra. He quickly established himself as a tutor in natural history for Glasgow University's Further Education Department and also as a lecturer to many local societies. He became a warden for the Nature Conservancy at the Loch Lomond National Nature Reserve. His friend Derek was now a research officer with the Nature Conservancy at their Scottish HQ in Edinburgh. John began the monitoring of breeding Peregrines and Ravens in the Loch Lomond and Trossachs area to support the national monitoring programmes co-ordinated by Derek. This was to occupy virtually all of his spare time from April to June for the next 25 years.

John was a gifted writer. As he approached retirement, Derek Ratcliffe persuaded him to write a volume for the New Naturalist series. In 2001, *Loch Lomondside* (NN88) was published to great acclaim. As a long-standing member of the Glasgow Natural History Society, he was recently awarded Honorary Membership for his outstanding contribution in writing over 50 papers/notes for the *Glasgow Naturalist*. He also contributed many papers to *The Western Naturalist, Forth Naturalist, Scottish Birds* and the Drymen Historical Society. He was awarded an Honorary MA by the University of Stirling (1991) and the Fellowship of the Royal Zoological Society of Scotland (1994).

John was also a long-standing member of the SOC. His contribution to Scottish ornithology was considerable. He was a regional organiser

for the first BTO Breeding Atlas, compiled an annual Loch Lomond Bird Report covering the Loch Lomond drainage basin from 1972 to 1994, co-ordinated BTO species surveys within his recording area for species such as Rook and Buzzard; carried out long-term monitoring of Peregrines, Ravens, and heronries, discovered and monitored a breeding population of Common Scoter on Loch Lomond and co-ordinated an extensive survey programme of the woodland breeding bird communities around the loch.

A very good tutor and mentor, he encouraged many student naturalists, providing early-career opportunities at Loch Lomond NNR, including two subsequent SOC presidents.

John passed away on 16 March 2019 after a short spell in hospital. Loch Lomond lost its greatest naturalist and Scotland lost a popular and widely regarded field ornithologist. It is fitting that the celebration of John's life which took place in Drymen on 2 April, was the 51st anniversary of his discovery of the first Scottish record of Laughing Gull, just three miles away. That serendipity would have amused him!

He is survived by his wife Sandra and their two sons. All his many friends mourn his passing and consider it to have been a great privilege to have known him and to have enjoyed his company.

David Clugston, Chris Waltho and Bernie Zonfrillo

Robert McCurley (1934–2019)

Plate 258. Bob McCurley. © Family *photograph*

Bob was born in Consett, County Durham where his father was a coal miner and his mother had her hands full with nine children. Tragically, she died when he was only five leaving him to be largely brought up by his older sisters. Bob used to enjoy telling stories about war time in Tyneside and the excitement as a wee boy of being dragged into the air raid shelters during a raid. At the age of 15, he left school and went to work down the pit. Bob hated being down the mine as he loved the outdoors and the countryside though he was also very keen on sport. As a teenager, he was so good at billiards that the men at the local miner's welfare club chipped in to send him to the British Amateur Championships in London, playing future world champion Rex Williams along the way. Later, he became something of a legend at Caird Park Golf Club where he was Club Champion seven times.

His sister had moved to Dundee and invited the 17-year-old Bobby to move up. Arriving in Dundee in 1952, he secured a job in the menswear department of John Temples. In 1958, he married Margaret; soon the family came along with Fergus and Robin. In 1969, they were lucky enough to get a new council house which felt like luxury; there was a bath so no more washing in the sink.

Fergus and Rob remember great caravan holidays in Aberdeenshire, St Andrews and North Berwick. Often when their Dad was driving, he would suddenly screech to a halt because out of the corner of his eye he had spotted a bird which he wanted to look at more closely.

Bob continued to work in retail latterly in David Low, the main sports shop in Dundee. In 1999, he retired and this gave him more time for his beloved ornithology.

Birdwatching was a huge part of Bob's life. He joined the SOC in 1982, serving as a branch committee member and eventually Treasurer (a post he held until 2015), and leading many field trips. He was one of the small group who in 1997 formed the Angus and Dundee Bird Club (ADBC) which he chaired for many years. He was tireless in his efforts for the club and was particularly pleased when, after a lot of work, they were successful in being awarded lottery funding to build a seawatching hide at Lunan Bay. He organised the funding for AV equipment for ADBC meetings, in the same way as he had done for Tayside SOC. Following a holiday with fellow SOC members in Denver, USA, he helped to twin the Denver Ornithological Club with the Angus club. Bob was a great public speaker and was much in demand to give talks and presentations on birds, on butterflies and on wildlife - a real all-round naturalist. He and a fellow ADBC member assisted primary schools in Carnoustie to set up bird nest boxes and feeding stations. Until recently, he served on the committee which oversaw the care of wildlife on the Barry Buddon Army Training camp. He was presented with a digital zoom camera by ADBC members to mark his 80th birthday and soon put it to good use, quickly mastering the new technology. In his 80s, Bob still did regular WeBS counts and in addition to his ongoing involvement in his SOC branch, he supported local branches of the BTO, RSPB, SWT, and Dundee Naturalists. He received a well-merited SOC Branch Recognition Award in December 2018.

Bob really enjoyed retirement. However, Margaret died suddenly in 2011, a devastating blow from which he never fully recovered. But, always resilient, he met the reality head on. His garden, the family and birdwatching kept him occupied and fit. And he was active right to the end. On 2 June 2019, Bob drove himself out to Barry Buddon to take some photographs. That evening he had a visit from Fergus who asked his Dad if, looking back over his 85 years, he had any regrets. Bob replied, no, he was happy with all he had done. Five minutes later, still seated in his chair, Bob quietly called out Fergus's name and gently passed away. A wee while back he had been diagnosed as having an issue with his aortic valve and this caused the immediate and sudden fateful aneurism.

Compiled by Bob's family and friends

James D. Lough (1936–2019)

Plate 259. James Lough.

When we returned to the Borders in 2005, I began meeting James in various bird hides. An intensely private man, on bumping into James in a hide, he would briefly discuss what he had seen, remark on any unusual sighting in the hide's log, and then move on. After I started visiting Hule Moss regularly and commenting in the log, James began to chat a little longer and gradually offered other, less-known sites that he found to be great birdwatching places and a friendship developed.

James preferred to birdwatch on his own. I recall only one occasion when he was happy to be sharing a hide. The Hule Moss hide was rather dilapidated and small. When a friend, Andrew Mossop, and I hiked out one evening to

hear the geese arriving, it was a surprise to find James there with a lady from Scottish National Heritage to confirm the geese count. Four of us made for a cosy evening; the noise of the geese arriving however was, as ever, fantastic.

James contributed sightings to *Birdwatching* magazine for many years, and also to BTO BirdTrack. He kept meticulous bird diaries. After I had taken over the shop, James began to bring his daily records in and I would share them on the *Borders Bird Report*. When he had something special to report he would open the door and offer his notes with a flourish. Humdrum days saw a used envelope pushed through the door, sometimes with a tap on the door as James would appear at the window, then move off. Some records involved unusual local place names - Rotton Row and Hungry Snout raised several e-mail queries, so James drew me a wee map of their locations.

After a health scare last year, James's family convinced him to cut down on visits to the more remote places. But, on leaving Yetholm Loch at dusk one evening, he fell and was unable to rise. Unwilling to put anybody to any trouble, James wrapped himself in his big coat and settled down for the night, exactly as he had when in the SAS (Special Air Service). When we found out the next day that he had spent the night out in the open, any concerned queries were brusquely dismissed as he was 'fine'.

James was an avid fan of Heart of Midlothian Football Club, and, when he was spotted in his Hearts scarf waiting for a lift to the game, we knew there would be no bird report that night.

James is survived by three children and two grandchildren and will be sorely missed by friends and fellow birders, football fans and pub mates.

Andrew Mitchell

Bede Pounder (died 2019)

Bede Pounder, a long-term member of the Dundee branch of the SOC, passed away in March after a long illness. He was chairman of the Dundee Branch from 1972 to 1975 and again from 1981 to 1984 and served for four spells on the branch committee between 1969 and 1985.

He was best known for his work on seaducks in the Tay estuary and further afield and their relationship with human activities which led to papers such as 'Waterfowl at effluent discharges in Scottish coastal waters' in *Scottish Birds* and 'Wintering flocks of Goldeneyes at sewage outfalls in the Tay Estuary' in *Bird Study*. He was a regular contributor to the *Angus & Dundee Bird Report* and *Angus Wildlife Review* as well as the *Scottish Bird Report*. His wildlife interests were not confined to birds and he was an Honorary Vice President of the Dundee Naturalists' Society.

The editors

NEWS AND NOTICES

New members

Ayrshire: Mr J. Eagles, **Borders:** Mr & Mrs D. Rowell, Mr M. van Beinum, Ms F. Wemelsfelder, **Caithness:** Mr N. Eustace, **Central Scotland:** Mr W. Attwood, **Clyde:** Dr E. Campbell, Miss C. Cochrane, Mr D. Dunbar, Mr R. Eddie, Mr J. Lindsay, Mr M. McDonald, Mr R. Morrison, Mr S. Rogers & Ms S. Rose, Dr B. Swallow, **England, Wales & NI:** Mr & Mrs M. Allport, Mrs M. Bicknell, Mr & Mrs T. Cooper, Mr J. Kirk, Mr S. Mallinson, Ms P. Petts, Mr R. Poyer, Mr G. Todd, **Fife:** Ms J. Gerken, Mr K. Hynd & Ms B. Lewis-Enright, Mrs E.J.O. Sutherland, **Highland:** Mrs A. Goddard, Mr & Mrs A. Meldrum, Mr & Mrs A. Puls and family, Mrs A. Simpson, **Lothian:** Dr A. Ahrends, Mr G. Anderson, Miss S. Bennett, Mr & Mrs J. Blakely, Mrs J. Boggon, Mr J. Clark, Ms F. Collins, Miss C. Cumming, Mrs F. Cunningham, Ms M. Edward, Mr G. Hateley, Mr M. Hendrikson, Mr R. Hummel & Ms P. Kennedy, Mrs F. Johnston, Mr & Mrs A. Low, Ms M.E. Mackenzie & Mr S.K. Rimmer, Ms A. Middleton, Mr & Mrs R. Morton, Mr M. Murdoch, Mr K. Sharkey, Mrs S.A. Smith, Mrs K. Thody, Mr R. Wilson, **Moray:** Mr J. Harrison, Dr & Mrs T. Shallcross, **North-East Scotland:** Mrs C. Marsden, Mrs A. Meek, Mr S. Stuart, Mr M.G. Webber, **Overseas:** Dr H. Mikkola, Mr A. Parisi, **Tayside:** Dr N. Hadfield, Mr B. Kelly, Mr F. Todd.

Scottish Birdwatchers' Conference

21 March 2020, Elgin Town Hall. Programme and booking information enclosed or visit the SOC website www.the-soc.org.uk to book online.

Membership subscription rates

The SOC Council agreed previously to review membership subscription rates every two years, and this they have done, the last review being in 2017. Since then, a Finance Committee has been formed and it now considers financial matters, such as subscription rates.

Accordingly, the Finance Committee met on 6 September 2019 to consider the biennial rate review. As a result of the discussion at that meeting, a proposal was put to the Council meeting of 9 September that there should be no change in membership subscription rates this year.

Members will be aware that over recent years the Club has been engaged in financing some major projects such as the upgrading of the Club's website, the holding of a Recorder's Conference and the release of the unique and much-praised 'Where to Watch Birds in Scotland' App.

The Finance Committee felt that the funds for such worthwhile projects should come from our current reserves rather than be met, even to some extent, by higher membership subscription rates. The next review will be in early 2021.

Andrew Thorpe, Honorary Treasurer
Email: mail@the-soc.org.uk

Reviews editor retires

For nine years, Paul Speak worked quietly and efficiently behind the scenes as the book reviews editor for *Scottish Birds*, tweaking and massaging each of the reviews prior to publication, working to set print deadlines four times a year and maintaining his consistently high standards with minimum fuss. We would like to record our thanks and appreciation to him for his dedication and the meticulous care he took in this work, and we wish him well in his new home.

Waterston House

Art exhibitions: Darren Woodhead, 'New Work', 22 November 2019–15 January 2020. Darren Woodhead spent most of the last two years working along the coast and river near to his home of Haddington, East Lothian. Here his subjects have been the birds, insects and landscapes found along these picturesque stretches of the countryside that abound with wildlife.

As always, Darren worked directly from life, straight in brush with watercolour. The rain may stipple the paint, ice rosettes may be seen within the textures of the colour on paper, but this is all part of the process for Darren. Importantly, his work is also about the use of the white of the paper (negative space), a way of painting the subject without making a mark which has become a defining feature of his journey as an artist.

Plate 260. Tree Sparrow pair in the early morning. © *Darren Woodhead*

The exhibition will encompass all of the above: a journey through the Lothian valleys and along the coast in watercolours painted 'en plein air', with the trill of Curlews and the flutter of passing butterflies as the backdrop to his outdoor studio.

Scottish Nature Photography Awards: 18 January–19 February 2020

Waterston House is hosting the touring exhibition of the Scottish Nature Photography Awards. The exhibition presents the winning entries from the 9th annual *Scottish Nature*

Plate 261. Curlew with Shore Crab, Loch Fleet, Sutherland (1st prize in the Scottish Wildlife Behaviour Category 2018). © *Toby Houlton*

Plate 262. Roe Kid Flower, Edinburgh (1st prize in the Scottish Wildlife Portrait Category 2018 and overall winner of the Scottish Nature Photographer of the Year 2018 award). © *Phil Johnston*

Plate 263. Red Grouse, Cairngorms (2nd place in Scottish Wildlife Portrait Category 2018). © *Carol Dilger*

Photographer of the Year competition. All the photographs in the exhibition were taken in Scotland by professional and amateur photographers and filmmakers from around the world, including under-18s and students.

The exhibition highlights the photographers' interpretations of wildlife, landscape, environmental, botanical and abstract subjects, selected by the judging panel: Raymond Besant, Jamie Grant and Niall Irvine. It includes a screening of the *Scottish Nature Video Award* for short films about nature shot in Scotland.

Regional Bird Reports

Argyll Bird Report 2018 - FREE!

This report is now freely available as a PDF download from the ABC website www.argyll-birdclub.org (under the Publications tab). It covers the 226 species that were recorded during the reporting year. This is a useful read if you are visiting the area as sightings are placed in the context of previous records and the ten sub-regions of Argyll. Overall, the report is a more simplified version of the previous hard copies and concentrates on the systematic list and has extensive photographs.

North-East Scotland Bird Report 2017

For the first time, the North-East Scotland Bird Report includes mammals, amphibians and reptiles. To order a copy by post, please send a cheque payable to 'North East Scotland Bird Report' for £9.50 (includes postage) to: Dave Gill, Quarmby, Nethermuir Road, Maud, Peterhead AB42 4ND. To pay by bank transfer, please email Dave at davidgill1928@john-lewis.com. Copies are also available to purchase over the counter at Waterston House,

priced at £10 (please check stock before travelling - Tel: 01875 871 330). The report production team would be pleased to place anyone on their mailing list for the report. Simply drop Dave Gill an email.

Orkney Bird Report 2018

Giving a very full and well-illustrated account of another year when Orkney clocked up around 250 species. Good news included the pair of White-tailed Eagles, which raised two chicks on Hoy, the first White-tailed Eagles to have nested successfully in the county since the 19th century. Two species were added to the county list, subject to acceptance by BBRC - Black-eared Wheatear and Eastern Yellow Wagtail.

A really important article in the report is the detailed summary of surveys of the two proposed Special Protection Areas around Orkney for wintering seafowl - Scapa Flow and the waters immediately north of Orkney Mainland. These stretches of sea are vital for Slavonian Grebe and Great Northern Diver. Another seven species, from Eider to Shag, also occur in nationally important numbers.

The report is available for £10 (plus £2 p&p). Payment is accepted by PayPal, bank transfer or cheque. To order a copy, email orkneybirdreport@gmail.com

Lothian Bird Report 2017

The Lothian Bird Report for 2017 edited by Ian Andrews and Keith Gillon is now available. For the first time, the report includes all species that have been recorded in the recording area, with status summaries for those species not seen in 2017. At the time of writing, copies are available for £10 from Waterston House as well as Viking Optical Centre, 101 Rose Street, Edinburgh (please call ahead before travelling). The report can also be ordered by post (for £11.60 including p&p). Details of how to order can be found on the branch website: www.the-soc.org.uk/bird-recording/local-recorders-network/areas/lothian.

North Sea Bird Club to be wound up

The North Sea Bird Club (NSBC) first received records in 1979 and was based at the University of Aberdeen. The aim has been to obtain, collate and analyse observations of birds, cetaceans, marine mammals and insects observed at offshore oil and gas installations. Since 1979, we have received over 150,000 records, mostly relating to birds. Twenty-six companies have supported the club financially and some have come and gone due to industry and oil price fluctuations, with a few supporting us throughout.

In recent years particularly, the number of records received has dropped significantly, due mainly to changed working practices and reduced manning levels following the major downturn in the oil price in 2015. This has made it more difficult to justify funding from our sponsoring companies and also to make meaningful analyses of these records, all of which are provided on a voluntary, ad hoc basis.

Consequently, the decision was taken by the club's committee, together with the sponsoring companies, to wind up the club on 31 December 2019.

In future, any records of birds at offshore installations should be sent to BirdTrack, which can be accessed through the BTO website www.bto.org/our-science/projects/birdtrack, ideally requesting that the offshore installation be registered as a site.

In conclusion, our thanks go to the over 800 observers who have contributed records from over 400 installations and to our sponsoring companies who have supported us over the past 40 years.

Anyone wishing to access previous records of species recorded offshore since 1979 can do so by visiting the oSBR on the SOC website at www.the-soc.org.uk/about-us/online-scottish-bird-report.

Andrew Thorpe, NSBC Recorder
Email: Andrew.Thorpe147@btinternet.com

Award nomination

Hearty congratulations are due to members of the Lothian and Borders branches who have been nominated for the Marsh Award for Local Ornithology 2019. The following note was received by Malcolm Ross from Andy Clements, BTO Chief Executive:

"It is my great pleasure to let you know that this year your group, Borders SOC/Borders & Lothian were nominated for the Marsh Award for Local Ornithology for impressively publishing the SE Scotland Atlas and an excellent county Bird Report after the untimely passing of Ray Murray. The Marsh Awards for Ornithology are sponsored by the Marsh Christian Trust and the awards are celebrated each year at a BTO reception held in The Mall Galleries, London, SW1. Members of the public and BTO staff can nominate individuals or a group for each of the five awards (for further details about the awards please visit www.bto.org/about-bto/governance/ ornithology-awards). Unfortunately, this year it was a very strong field and your nomination was unsuccessful. We do hope, however, you feel very proud to have been nominated for this award."

The Breeding and Wintering Birds of Fife

The most recent atlas of birds in Fife was published in 2016 although the fieldwork ended in 2013. Although many of our findings have altered since then, it is still of great interest. We have several books still available and, to reduce stock, we have decided to give copies away to anyone in Fife who is genuinely interested. These will be free (although a small donation would not go amiss!). Our profits have been, and will continue to be, used for small grants for research projects in and around Fife.

If you wish to take advantage of this offer, please contact Norman Elkins (jandnelkins@btinternet.com) in the first instance. Copies will be available at Fife SOC meetings but can also be collected from addresses in Cupar and Crail.

Norman Elkins
Email: jandnelkins@btinternet.com

Mark Lewis - a new member of SBRC

SBRC welcomes Mark Lewis as a new member of SBRC, replacing Martin Scott from November 2019. Mark has been birding in North East Scotland since moving to Aberdeen from Durham, in 1995. He is a regular autumn migrant to Sanday, Orkney, and also to Ouessant, off the coast of Brittany, France. However, Mark spends most of his birding days at Girdle Ness, where, depending on the time of year, he seawatches, looks for migrants, sound records and records nocturnal migration. He has been a member of the Upper Forth and North East Scotland Rarities Committees, from 2012 and 2016 respectively.

SBRC would like to acknowledge its gratitude to Martin Scott for his work over the period of his tenure on the committee. Martin has contributed much to SBRC, and we wish him well for the future.

Chris McInerny, on behalf of SBRC
Email: chris.mcinerny@glasgow.ac.uk

UK Honey-buzzard Survey 2020

The Honey-buzzard is a rare and secretive breeder in Scotland. However, recent studies in Highland and Central Scotland have shown that it is not as rare as we once thought! In 2020 there will be a UK-wide survey of breeding Honey-buzzards organised by the Rare Breeding Birds Panel (RBBP). Key areas will be covered by Honey-buzzard workers and raptor group members. There are a few gaps, however, especially in Borders, Argyll, and Angus. If you want to help and can commit to five days or more during July and August 2020 please contact one of the coordinators below.

Ken Shaw
Email: kenshaw495@gmail.com

Chris McInerny
Email: chris.mcinerny@glasgow.ac.uk

Carol Miller
Email: carol.miller1230@outlook.com

Correction

In the President's foreword in the Sept issue, Bornholm was incorrectly cited as a 'Swedish' island. It should read 'Danish'.

THE HOOT

THE CLUB'S QUARTERLY DIGEST, EMAILED TO ALL MEMBERS THAT HEADQUARTERS HAVE AN EMAIL ADDRESS FOR

DON'T THINK YOU RECEIVE IT?

If you don't see *The Hoot* in your inbox, please check your junk/spam/clutter folders as this email can sometimes be classed as spam. Still can't see it? Contact the office on **01875 871 330**, email **mail@the-soc.org.uk** or contact us via the website **www.the-soc.org.uk/about-us/contact-us** to check we have your up to date/correct email address on file.

LOOK OUT FOR ARTICLES AND FEATURES LIKE THESE...

NEST BUILDING IN LONG-TAILED TIT

By the time nest building is complete, a pair of Long-tailed Tits will reportedly have flown 600-700 miles gathering nesting materials. These 'flying teaspoons' have one of the most elaborate nests among British birds. The nest is the assembly of about 6000 separate pieces of four materials: small leafy mosses, silk from spider's egg cocoons, lichen and feathers. To meet their feather quota, it is thought that the adults may locate a bird carcass or perhaps a Sparrowhawk's plucking post. In total, construction of the nest can take around three or more weeks of hard labour.

DID YOU KNOW?

A GREEN WOODPECKER'S TONGUE IS AN EXTRAORDINARY 10CM LONG (FOR COMPARISON ITS BEAK IS 4.5CM IN LENGTH!) AND COVERED IN A STICKY SECRETION WHICH AIDS THE BIRD IN CAPTURING ITS MAIN PREY ITEM - ANTS!

THE NEXT ISSUE WILL BE WITH YOU ON THE 14TH JAN 2020!

Plate 264. Susan Horne (former SOC Librarian) with Club Archivist Ian Elfick preparing some of the archive recordings for transfer to the National Library of Scotland for digitisation, Waterston House, October 2018. © *SOC*

Listen up out there!

A. KNOX

One of the lesser-known treasures of the SOC is its sound archive - but that's about to change! A lot of the recordings are going online for anyone to listen to, anywhere.

We are collaborating with the National Library of Scotland and the British Library to digitise many of the Club's recordings to make them more accessible (Plates 264–266). As part of a large Lottery-funded project, the SOC is one of the first archives to have its collections digitised. These aren't just recordings of bird song and calls (yes, there are some of those). The more important, and engaging, part of the collection is the selection of interviews with well-known personalities and 25 recordings of the often lively - if that's the right word - after-dinner speeches from our conferences in the 1960s through to the 1980s.

There are interviews with J. Morton Boyd, Andrew MacMillan, Malcolm Ogilvie, Ian Pennie, George Waterston talking about Fair Isle, an interview about life on Foula, a 1973 radio programme on egg-collecting, David Lea speaking about Orkney, Joe Eggeling on the Isle of May, Bobby Tulloch on Shetland and Snowy Owls and much more.

And speeches by Dougal Andrew, Roy Dennis, Andrew MacMillan, Maury Meiklejohn, Ian Pennie, Desmond Nethersole-Thompson, Ian Wallace, Adam Watson, Vero Wynne-Edwards and others, and even a rather esoteric tape of a Willow Grouse heartbeat recorded from radio signals. The collection will be going online during 2020 after the NLS completes some of the final work relating to the collection.

An important part of the project is an artist in residence programme based around our digitised recordings, engaging new audiences

Plate 265. Conor Walker from the National Library of Scotland transporting the recordings in preparation for digitisation, June 2019. © *NLS*

Plate 266. Conor Walker and Rob Smith from the National Library of Scotland unpacking the recordings in Glasgow in preparation for digitisation, June 2019. © *NLS*

with the SOC and our bird sounds. Val O'Regan from the Birdhouse Studio in Argyll (Plate 267) was appointed (against stiff competition) to run workshops in Argyll with local primary school children aged 4–12 and older adults (aged 50+) at the Benmore Botanic Gardens, leading to an exhibition at the Gardens and hopefully at other venues, maybe even Waterston House. The workshop participants will explore our digital collection and create artworks inspired by the sounds: imaginative portraits of birds, comic style Zines featuring stories imagined from the recordings and colourful batik samples which will be assembled into a large wall-hanging.

Plate 267. Artist-in-residence Val O'Regan who will be working with our digitised collection and local communities in Argyll, October 2019. © *V. O'Regan*

The sound recordings in the SOC library have been the Cinderella of the archive but Cinders is now going to the ball! Anyone will be able to listen to them anywhere, via the British Library web site. Old tape recordings don't last for ever and they need special care which we have not really been in a position to provide. Creating these new digital surrogates will ensure their content lives on.

Can you help?

We are still trying to finalise rights clearance for a few people featured in the recordings. Unfortunately, several of them are no longer with us so we need to locate relatives for those ones. Do you know how we might contact anyone on the list below or their relatives? If you think you might be able to help, please contact the National Library of Scotland soundpermissions@nls.uk as soon as possible. Thank you!

Willie Austen, Mary Blance, Bruce Campbell, W. A. J. 'Peter 'Cunningham, Sir Robert Dougal, W. J.Eggeling, Douglas Grant, Martin Wyatt Holdgate, Anders Holm Joensen, J. D. Matthews, Sam McKinley, Marion McMillan, Maury F. M. Meiklejohn, Norman Moore, Ann Morris, Gustaf Rudebeck, William A. 'Bill' Sinclair, Henry Neville 'Mick' Southern, Hunter Sutherland, Valerie Thom, Sir Arthur Landsborough Thomson and Robert Walker.

Alan Knox, Chair, Library Committee
Email: a.g.knox@abdn.ac.uk

Plate 268. George Waterston with George 'Fieldy' Stout (centre) and 'Jimmy Midway' Stout (right), Fair Isle, c.1936. © *FIBO Archives*

From the archives

G. STOUT

The Club's archives contain a wealth of fascinating information - diaries, reports, recordings (see page 332–333), photographs etc.

The following example is a letter from George 'Fieldy' Stout of Field croft, Fair Isle to George Waterston, dated 24 May 1936. It gives a fascinating personal account of what must have been a huge fall of migrants on the Isle in spring 1936. At that time, 'Fieldy' was the 'resident birder' and using his extensive field experience, and occasionally his single-barrelled shotgun (Plate 268), he recorded the many birds he saw on the Isle. 'Fieldy' was to be followed in this role by his son 'Jimmy Midway' Stout.

Dear George,
What an enormous number of birds we had the whole first half of May [1936], but mainly on the 7th and 8th when 'there was a great multitude which no man could number'. I toiled manfully among the crowd, but found very little really new. I got one Reed Warbler and saw another, and slew another warbler which I could not find which I presumed was Bonelli's Warbler, but that was all I saw new in the small line. But no man could judge what was in yon migration as there were so many of the small warblers and they fairly enjoyed themselves feeding on the flies along the decaying ware at the beaches all along the Island.

There were thousands of Willow Wrens and Chiffchaffs, of which all three forms were present viz British, Continental and Siberian and an enormous number of Pied and Spotted Flycatcher. Some Chaffinches, 100s of Brambling and Reed Buntings and a mixture of the other buntings, Ortolan, Corn, Yellow and Little, a good few Linnets, Wrynecks, Garden Warblers and Common Whitethroats, Lesser [Whitethroats] 100s, Blackcap few only, Wheatear (Large) 100s, Redstarts 100s. I saw 3 Tree Sparrows one day and a Scarlet Grosbeak. I

will send dates later when I have time and a more detailed report. I saw one Nightjar and Jamie Wilson shot one some days later probably another bird. I also saw a Bittern, but did not get near enough to shoot and was unable to find the beggar again, but he was seen the following day near the same place. Bluethroats numerous, mainly Red-spotted Norwegian, but there were one or two White-spotted amongst them, although I did not actually get any. Shot one, but could not find him when he dropped. Tree Pipits in enormous numbers, few Meadow Pipits and six Red-throated seen. In fact all the common birds we have seen were there in force including the Continental Great Spotted Woodpecker, also a good number of Common and Black-headed Gulls, Whimbrel and Curlew, but not many waders, just a few stray birds. Wagtails quite a number, White, Blue-headed Yellow and probably the Grey-headed also.

There were also a few Golden Plover, but we have no Ringed Plover this year nesting, at least few if any; so far I have seen none except some migrants earlier in the season. We had quite a lot of Robins mainly Continental and also some Hedge Sparrows. There are a pair at North Haven yet and are probably nesting, as they have been almost a month now, but are easily overlooked and could easily elude the ordinary observer. Swallows etc etc also numerous. There were a few birds in yesterday. I saw a Wood Warbler and Bluethroat, Chiffchaff, Redbreast, Redstarts and Golden Plover and a harrier which was too far away to identify clearly. There was one with the big rush presumed a Hen Harrier and both Long- and Short-eared Owls with several Kestrels. In fact as someone puts it just quite a number of common things too numerous to mention. There were 3 or 4 pairs Iceland Redwings about the beginning of May, and I was half hoping last year's pair might have come back, but they have all passed on. But the big days there were Ring Ouzels, Blackbirds, Fieldfares, Redwings (ordinary), Thrushes (both varieties).

I will conclude now, as I want to get to bed, so best of luck from.

Geo. Stout

Postscript

Not so many years ago, the NMS in Edinburgh received from FIBO some skins that had been kept at the observatory for many years (per Bob McGowan). Amongst them was at least one Bluethroat collected by George Stout on 19 May 1936; there were others with day and month (May) only but it is assumed they were from the same batch.

Plate 269. Archie Bryson and 'Jimmy Midway' Stout (right) looking for migrants in a crop, Fair Isle, c.1936. © *FIBO Archives*

Plate 270. Children making bird and bat boxes under adult supervision, Linn Park LNR, Clyde, 23 February 2019. © *Dorothy Buchanan*

Building public engagement in Linn Park Reserve, Glasgow

M.& K. SINCLAIR

At 203 acres, Linn Park Local Nature Reserve is Glasgow's second largest park behind Pollok Park. It is located 6 km south of Glasgow and received its Local Nature Reserve status on 4 July 2012. The park is characterised by its 'natural' look, comprising mature semi-natural woods, mixed plantations and parkland trees with wildflower meadows. It is bordered by the communities of Simshill, Castlemilk, Muirend and Netherlee. There is a rich biodiversity with 250 plant species and 60 bird species recorded.

Project origins

In October 2017, aged 13 and very interested in nature and ornithology, I started a project called the '100 Nestbox Challenge'. The idea was to build 100 nest boxes from scratch and sell for a minimum donation of £10 to raise funds for the BTO, RSPB and SWT. As part of that project, I made an additional six which were donated to Linn Park via the Friends of Linn Park (FoLP) Community Volunteering Group in time for the 2018 breeding season. FoLP loved the boxes which replaced the remaining ones in the park which were in a poor state of repair. Shortly after donating the boxes, I was invited to join FoLP as a junior member and that was the start of an ongoing relationship which has developed into a major part of my conservation work.

Over the past two years with planning and coordination, my nest box monitoring programme within the park has expanded at a phenomenal rate. This has involved a novel nest box 'sponsorship' scheme which has provided a steady income stream to 'seed-fund' further bird monitoring work. With the support of FoLP, a number of public events were held to raise funds through this scheme. For a minimum donation of £10 people have been able to sponsor a nest box in the park for themselves or a nominated individual. For this, sponsors receive regular updates of the progress of their nest box during the nesting season (Plate 270).

One of the main purposes of the nest box sponsorship programme was to re-engage the public with wildlife in the park. The loss of a permanent ranger presence over the years had meant that opportunities to inform, educate and interest the public in the wildlife present had been diminishing over the years. For this reason, the nest boxes initially built focussed on bird species most likely to use the boxes and, therefore, stimulate public interest (i.e. tits and Robins). In 2019, the nest box type was extended to target a wider range of species known to use the park including Spotted Flycatcher, which has been declining nationally, Nuthatch, Treecreeper, Goosander and Dipper. It is acknowledged that the success rate of these boxes is likely to be significantly lower. Part of this expansion was funded by an RSPB award which paid for the materials for 20 nest boxes and also 20 bat boxes which were assembled by local primary school children. Each child was allocated a numbered box and, like box sponsors, were given regular progress updates (Plate 271).

Plate 271. Blue Tit nest with eggs, Linn Park LNR, Clyde, 30 May 2019. © *Michael Sinclair*

Nest box monitoring and results

In 2018, monitoring was carried out in accordance with the BTO's Nest Record Scheme from early April until mid-June. This involved a visual check inside the boxes (using a ladder for access). These weekly checks were carried out by myself and another FoLP volunteer in the lead-up to egg-laying and then twice weekly from egg laying until fledging. Out of 12 small boxes with holes (and one Robin box) erected in time for the nesting season, ten were used with 59 eggs being laid and 47 chicks fledging.

In 2019, a total of 60 boxes were erected. These comprised 36 small boxes with holes, ten Spotted Flycatcher, four Treecreeper, four Nuthatch, three Robin, two Dipper and one Goosander box. Thirty-nine out of 60 boxes were used. All but one of the small boxes with a hole were used and, predictably, all four Nuthatch boxes were also occupied by Blue Tits. A total of 140 eggs were laid, of which 16 were unviable, 15 chicks died and 109 chicks fledged. These figures are entirely consistent with national survival data. All successfully fledged birds were Blue Tits with the exception of four Great Tits. In addition to the nest boxes, a further ten natural nest sites were also monitored throughout the year. These included Nuthatch, Long-tailed Tit, Blue Tit and Jackdaw (Plate 272).

Plate 272. Endoscope image of a Jackdaw nest, Linn Park LNR, Clyde, 9 May 2019. © *Shona McNicol*

The huge expansion in nest box numbers meant that monitoring the boxes with only two volunteers carrying out visual checks using ladders was simply not viable. A new monitoring approach was needed. Following research, it was decided to purchase a number of endoscope cameras.

Plate 273. Endoscope in use by Roderick Morrison (left) and Michael Sinclair, Linn Park LNR, Clyde, 7 April 2019. © *Kevin Sinclair*

To assist with monitoring, ten volunteers were recruited and trained in the use of the endoscopes following the strict guidelines set out on in the BTO Nest Recording Code of Conduct. Of these ten, six included family groups including children under 12. We believe that this is the first monitoring project of its kind in Scotland to deploy this technology and involve public volunteers in this way. The endoscopes allowed substantially less intrusive monitoring compared to opening boxes and looking in. Being able to view and capture images on smartphones meant that pictures of developing nests could be taken and sent to nest box sponsors.

As in 2018, all the information was uploaded to the BTO database, DemON. Creating basic nest site profiles, adding co-ordinates etc for the BTO system took at least 20 hours and subsequent input of each data record for active nest box and natural nest sites has taken many more hours. A map made on separate software specifically for navigating the boxes was only available to the volunteers involved (Plates 273–274).

Conclusion

Overall this project has engaged well over 100 children and adults in box building, monitoring and sponsorship. Box updates on social media have consistently proved to be the most popular posts and the steady stream of positive comments and growing number of people looking to sponsor boxes and assist with monitoring is testament to the project's growing impact and popularity. The long-term aim is to increase the number of young people involved and continue to expand the use of technology and social media as tools to sustain engagement and grow interest in other aspects of the park's wildlife.

Acknowledgements

Thanks are due to the many volunteers from Friends of Linn Park who have supported with public information days and nest box sponsorship events and also to our nest box monitoring volunteers, without whose assistance in 2019 we couldn't have carried out this mammoth exercise.

Finally, we are grateful for the financial support provided by the RSPB, whose assistance has enabled us to extend the project reach and to those members of the public who have generously sponsored boxes in the park and whose funds have allowed us to expand the project from its humble beginnings in October 2017.

Michael and Kevin Sinclair
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In November, young Michael was presented with the ***National Biodiversity Network's Young Person's Award****. Our heartiest congratulations are due for all his hard work and enthusiasm.*

Plate 274. Michael receiving his National Biodiversity Network's Young Person's Award from Sir John Lawton, November 2019. © *Isobel Sinclair*

Plate 275. Glen Loyne, Highland, March 2017. © *Bob Thorp*

Letter from Scottish Environment LINK to First Minister, Nicola Sturgeon

SOC members will be conscious of current growing concerns regarding for example issues of global warming, pollution, species protection and habitat conservation. We therefore welcome an initiative by Scottish Environment LINK to engage the Scottish Parliament in addressing these and other issues as a matter of urgency. The following letter from that organisation details proposals so far in this respect.

Dear First Minister,
as you recently acknowledged, our planet faces a climate emergency. Inextricably linked to this emergency is looming ecological disaster. Time is running out to tackle these huge global challenges. It will take concerted, radical action from leaders around the world to pave the way for transformative change in line with our sustainable development commitments. We must not let Brexit derail us from tackling these twin problems head on. Whatever the outcome of the current political uncertainties we must set robust, binding targets for nature's recovery, to safeguard both Scotland's nature and its people. This is why we, the undersigned, have come together from across society to ask you to bring forward a new Scottish Environment Act, a step which has already been supported by 22,000 members of the public through the Fight for Scotland's Nature campaign. Ensuring our world is rich in nature is the best insurance we have against dangerous climate heating. Protecting, restoring and enhancing Scotland's environment will help to limit temperature increases and help to adapt to some changes that we already cannot avoid. Restoring Scotland's natural world to its full potential would give us so much more than insulation against climate change. Everyone has the right to a clean and healthy environment. Nature enriches people's lives. It cleans our air and our water, improves our physical and mental health, underpins Scotland's global image and exports, and improves the places we live. For all of these reasons, we believe your Government should put forward a new Scottish Environment Act that makes Scotland's vision to be an environmental world leader a reality.

[*Signed by 97 conservation bodies, including SOC and RSPB*]

Reply from Nicola Sturgeon

Dear Ms Vlastari.

Thank you for your letter of the 27 June concerning the global climate and ecological challenges we all face and the importance of safeguarding Scotland's nature. I recognise and very much welcome the strong interest in these issues.

The Scottish Government has consistently recognised the importance of the natural environment to our prosperity as a nation and to people's health and well-being, and our responsibility to help address the global challenges of climate change and biodiversity loss.

The value of our environment is reflected in our National Performance Framework and our Economic Strategy, where protecting our environment is a key part of achieving sustainable and inclusive economic growth. We have developed a Natural Capital Index to ensure that we recognise the massive contribution of the environment to our economy and our wellbeing, today and into the future. As you know, we have strong environmental legislation and regulation in place in Scotland and a strong record of delivery.

The challenges facing biodiversity are as important as the challenge of climate change, and I want Scotland to be leading the way in our response. We welcomed the recent Net Zero report by the Committee on Climate Change, and immediately amended the climate change bill to reflect the recommendation that Scotland adopt the challenging target of achieving net zero emissions by 2045. We are among the first countries to commit to undertaking a thorough analysis of our action on biodiversity in response to the recent Global Assessment on Biodiversity, and we will write to Parliament with our initial assessment by the end of the year. We are also playing an active role in supporting the development of the post-2020 global biodiversity framework, and will host a conference in early 2020 in the lead up to the 2020 Conference of the Parties in China.

In Scotland, we continue to pay attention to what the evidence is telling us and take action to tackle climate change and create a circular economy. We were the first country in the UK to propose legislation to ban the manufacture and sale of plastic cotton buds. We were also the first to commit to introducing a deposit return scheme for drinks containers and announced the scheme design in May. In 2018–201 9, Scotland created 84% of all new woodland in the UK. As part of our climate change commitments, we have already increased the planting targets for the future to 15,000 ha a year from 2024/25.

I share your concerns on the potential impact of Brexit on our environment. The UK Government's irresponsible pursuit of a hard or no deal Brexit and their failure to engage meaningfully with the Scottish Government threatens the progress we have all made when it comes to our natural environment. Despite this uncertainty, we have made a clear commitment to maintain or exceed EU environmental standards in future. We have also prioritised intensive planning and preparations to mitigate the environmental impact of a potential no deal exit, including taking forward a substantial programme of secondary legislation. While my clear preference would be to remain fully within EU governance systems, our recent consultation set out the systematic and considered approach we are taking to the future of environmental principles and governance in Scotland should the UK exit the EU. This includes clear proposals to legislate to ensure that the four EU environmental principles continue to guide the development of policy and law in Scotland. The responses to this consultation are helping finalise the detail of our approach. We will legislate at the earliest opportunity, taking account of the need for any further consultation exercises, to ensure we have appropriate and effective arrangements in Scotland.

Following our online discussion last year, we are continuing to develop our Environment Strategy. This will set out our long-term vision to protect and enhance our environment, ensure a net-zero and circular economy underpinned by sustainable use of our natural assets, and secure the right of everyone in Scotland to a healthy environment. It will show how our extensive,

Plate 276. Sligachan, Isle of Skye, Highland, March 2017. © *Bob Thorp*

existing policies, actions and commitments are helping to achieve this vision. As we look ahead to future developments, from the recommendations later this year of the independent review of Scotland's air quality strategy to new international targets on biodiversity being set next year, the strategy will help identify where further collaborative actions are required, including across government portfolios, to support the transformative changes needed.

I have been clear that we do not underestimate the difficulties, complexities and challenges involved in finding effective responses to climate change and biodiversity loss. We can all take some pride in the progress that Scotland has made, while recognising that more needs to be done. I welcome the continued contribution of your organisations and look forward to working constructively together to achieve our shared ambitions for the environment.

Best wishes, Nicola Sturgeon

The Chief Officer of Scottish Environment LINK, Deborah Long, has issued a blog in response to the First Minister's reply:
The following excerpt from it, for example, begins to insert some actuality into the general discussion so far:

"While the environment strategy being developed by the Scottish Government is welcome, unless it is underpinned by effective legislation it will be unable on its own to bring about the changes we need to see. We already have strategies that if enacted effectively could have been reversing some of the negative trends. The Biodiversity Strategy launched in 2004 and the Land Use Strategy launched in 2011 are both forward-looking in their approach, but neither are being implemented or enforced in a way that makes any significant change happen."

For the full blog, see: www.fightforscotlandsnature.scot/news/nicola-sturgeons-letter-underlines-commitment-to-nature-now-lets-see-a-scottish-environment-act/

The above letters date from June/July 2019. You will be reading this now in your December edition of 'Scottish Birds'. Regarding the points and suggestions raised, are you aware of any recognisable changes so far in biodiversity, species protection or climate awareness which progress beyond mere political rhetoric?

Enhancements to oSBR

I.J. ANDREWS

With the number of records that can be searched in the online Scottish Bird Report (oSBR) now exceeding 175,000, several major enhancements were made to the website interface in August 2019.

You now have the ability to extend a search to all species in a specified year/area. To enable this, 'all species' has been added to the drop-down list of species along with pre-existing 'all areas' and 'all years' - but they can't be used together! If 'all species' is selected, then only a single area/year is possible. This enables you to replicate a local bird report for a specific year.

If you choose a species in the drop-down menu, linked subspecies and unattributed records will also be displayed e.g. if 'Mute Swan' is selected 'swan sp.' will also be displayed.

Cross-border records. A BBRC record attributed to two adjoining areas will now display if either area is selected.

You can now print or produce a pdf of the output of your search. Clicking the 'print' icon (top right) will open your computer's print menu. Here, depending on your setup, you should be able to choose to save to a pdf or use your printer.

Addition of North Sea Bird Club data. Thanks to input from NSBC Recorder, Andy Thorpe, annual species summaries since the 1990s, plus the 10th and 25th anniversary summaries (as 'other sources', see below) are now available.

The ability to add sources of information other than local bird reports has also been expanded. The BBRC archives are one such database, but now local avifaunas and other species summaries can also be selected. 'Other sources' that have been uploaded to date include 'The Birds of the Lothians' (1986) and Eagle Clarke's 'Studies in Bird Migration' Fair Isle summaries published in 1912.

Thanks go to Stephen Hunter for implementing these exciting enhancements.

Finally, a request for assistance. If anyone would like to help keep the oSBR up-to-date and comprehensive, now is a good time to volunteer. The work is not onerous, but does require a willingness to acquire what might be new IT skills!

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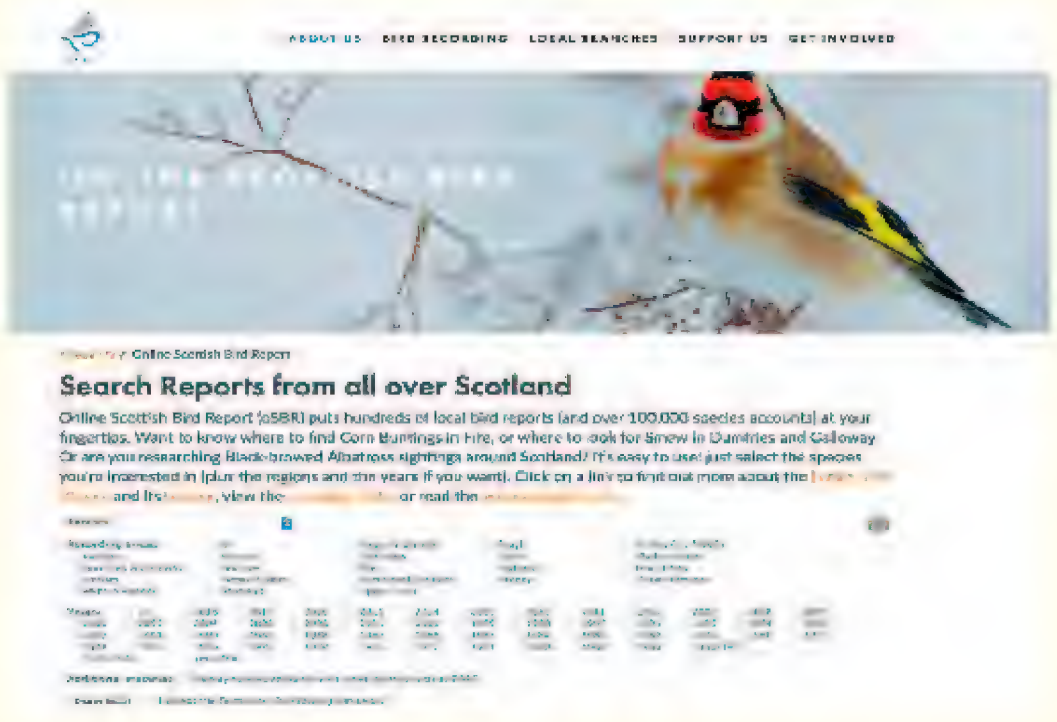
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Online Scottish Bird Report (oSBR) puts hundreds of local bird reports (and over 100,000 species accounts) at your fingertips. Want to know where to find Corn Buntings in Fife, or where to look for Snow in Dumfries and Galloway Or are you researching Black-browed Albatross sightings around Scotland? It's easy to use! just select the species you're interested in (plus the regions and the years if you want). Click on a link to find out more about the

Species descriptions from past editions of many Scottish local bird reports can be viewed via the SOC's oSBR.

This facility is free and simple to use. Find it in the 'Bird Recording' menu at www.the-soc.org.uk, choose a species, and select the year(s) and region(s) you are interested in.

Sending in your bird records

I.J. ANDREWS & S.L. RIVERS

As 2019 draws to a close, and daylight/birding hours decrease, many birdwatchers see this as the time to pass on their bird sightings to the Local Recorders. Depending on how active you are, this could be a hundred or so, or perhaps several thousand!

One of the Club's greatest contributions to Scottish ornithology is the documentation of bird numbers and the maintenance of the Local Recorders' Network. So, we would encourage everyone to share their records with the Local Recorders by some means.

The Local Recorders' database is an extremely valuable archive of local bird information and has numerous uses. Primarily, the database is the main source of information for producing the local bird report, a detailed record of the area's birdlife - critical for future conservation. It is also used to answer queries relating to individual species or localities, concerning planning applications, conservation issues, or the analysis of population trends.

Local Recorders are interested in receiving many categories of bird sightings within their areas. For example:

- data on breeding birds, such as territory counts, proof of breeding of scarcer species, counts of seabird colonies and indications of breeding success (with your agreement, records of nationally rare breeding birds will be shared with the Rare Breeding Birds Panel)
- regular counts throughout the year from your local patch, e.g. monthly peak wildfowl and wader counts
- early and late summer and winter migrants
- counts of seabird passage (preferably over timed periods and including commoner species)
- all records relating to influxes (e.g. Waxwing, Crossbill, Quail, Little Auk etc)
- all records of uncommon birds and rarities

In addition to the basic data, it is often of great interest to include general comments relating to some of the records (e.g. that this was a record count, the best/poor year for a particular species).

Bear in mind that over the years, the records that have proved most useful are those that allow comparison between years, that document the importance of local bird populations and that can potentially be used to reveal population changes.

How to submit your records

Each Local Recorder has their preference, so it is best to check with them (in person, in the Local Bird Report or on their website). Many observers now choose to use BirdTrack (of which the SOC is a core-partner along with the BTO and RSPB). It is easy to enter data (either as complete species lists or *ad hoc* records) and you can view and analyse your own bird records online. The local and national results are on the website for everyone to look at and, with your permission, all of your records will automatically be forwarded to the relevant Local Recorder, which greatly increases the efficiency of entering, exchanging and using the records.

Some Local Recorders may prefer you to use a specific Excel spreadsheet etc.

For more information on the Local Recorders' Network please see: www.the-soc.org.uk/bird-recording/local-recorders-network

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Plate 277. Razorbill, Isle of May, June 2019. © *Lang Stewart*

Reflecting on mirrorless cameras

L. STEWART

I am an amateur bird/wildlife photographer and have been taking photographs for the last 15 years using digital SLR (DSLR) cameras with long telephoto lenses. In April this year, I decided to change to a mirrorless camera system and purchased a Sony camera and telephoto lens.

The main difference between the two systems is that DSLR cameras have a reflex mirror inside which bounces light into the optical viewfinder. A mirrorless camera allows light directly into the image sensor and the electronic viewfinder gives a preview of the image. This produces a big difference in camera sizes - mirrorless on the left (Plate 278).

Like me, a lot of photographers have either changed systems or are considering this change. It is a big move to scrap one system in favour of another when you are taking good quality pictures, so you should expect it will at least be as good as your old system.

This was the first image with the new system (Plate 279a). I am delighted with my change and have noticed several improvements:

- Live view via the electronic view finder gives an accurate preview of the final image prior to pressing the shutter.
- There are more focusing points placed directly on the sensor giving more accurate focusing. My flight shots appear to be sharper (Plate 277).

Plate 278. Sony α7R III (mirrorless) and Nikon D3s (DSLR), 2019. © *Lang Stewart*

- Most mirrorless cameras allow silent shooting, a big advantage in some birdwatching situations with higher shutter speeds up to 10 fps.
- In-camera stabilisation allows hand-held shots in poor light at slow speeds with excellent results.
- 'Animal eye' focus works well in bird photography (Plate 279b).

Mirrorless cameras aren't for everyone, for example:

- If you have large hands, then the smaller camera body perhaps will not suit.
- The menu systems are more complex and take some time to work out.
- Small buttons that are infinitely programmable but take a bit of getting used to and battery life still could be improved.
- Large investment in cameras and lenses with Canon and Nikon makes change a financial question too.

However, despite this, a number of professionals are switching to mirrorless. David Tipling and Jari Peltomäki - two very fine and respected photographers - are delighted with their new cameras. Sony and Olympus would appear to be the main market suppliers and have both been innovative in new design and software. These photographers use an Olympus OM-D E-M1 Mark II camera with a 300 mm f4 pro lens. The weight of this combination plus either a 1.4x or a 2x convertor is 2 kg, easily half the weight of the equivalent Canon or Nikon setup and gives up to 1,200 mm equivalent focal length. The camera takes 18 fps in silent mode and is image stabilised allowing for good hand-held shots even at maximum magnification. With excellent weather proofing of the camera and lens, it is not hard to see why this package appeals to professional photographers.

Is it the end for DSLRs? I don't think so, but change is coming from mirrorless equipment with Nikon and Canon having to catch up and release their own new mirrorless models. Sales have slowed dramatically in both companies as they are squeezed from above by mirrorless cameras and from below by advanced smartphone technology. They will have to quickly adjust to this new market and reports from Japan suggest that they are having to change their strategy.

One thing is for sure - the old names in the camera world that had seemingly had their day, Fuji, Olympus, Panasonic and Sony have now produced improved and exciting equipment and we are spoiled for choice with the items we now use in our photography.

My only hope is that high volume produces lower prices - well, I am an optimist!

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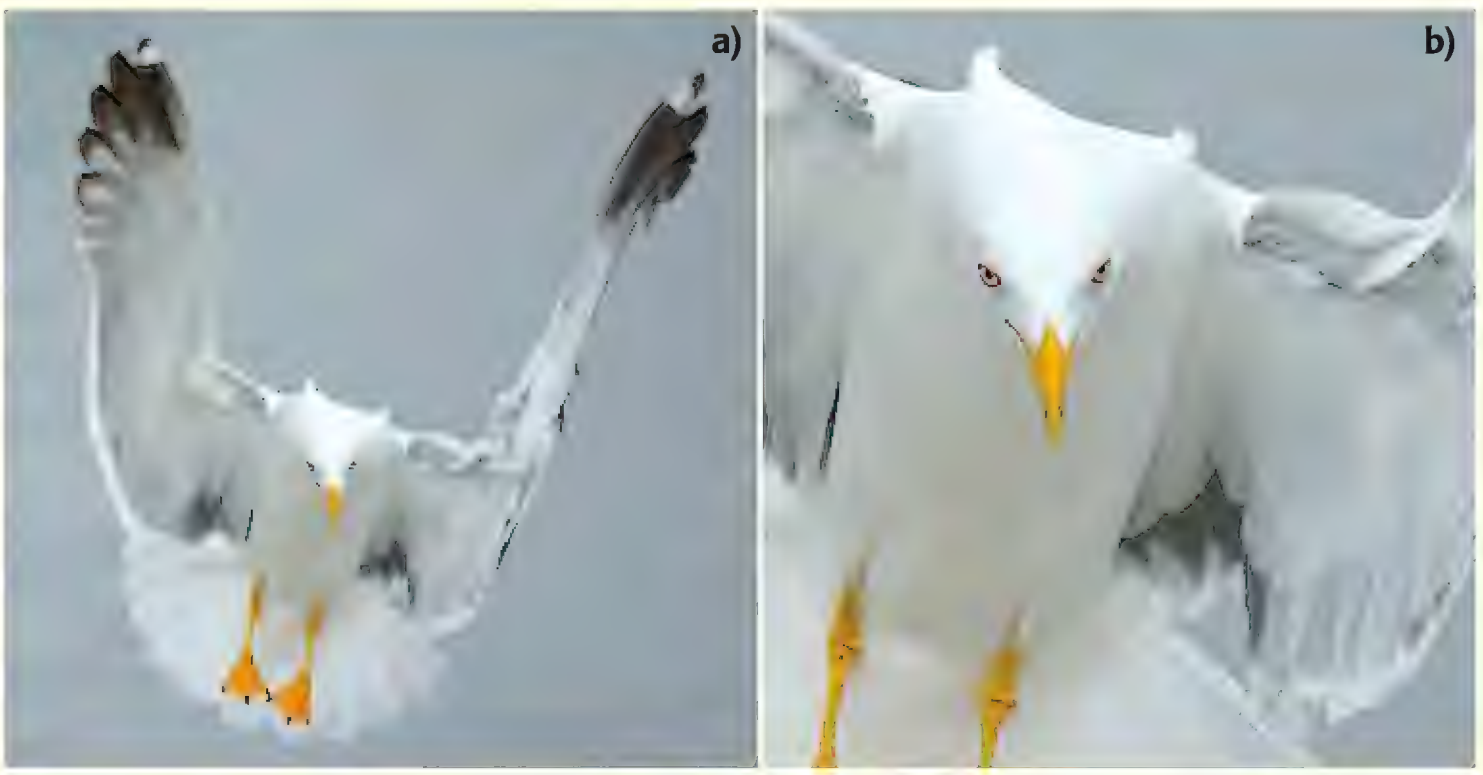

Plate 279 a–b. Lesser Black-backed Gull, Hogganfield Loch, Glasgow, April 2019. © *Lang Stewart*

Plate 280. View of the pool from the Marsh Hide, Baron's Haugh, Clyde, 15 August 2019. © *Jimmy Maxwell*

Aggression in Kingfisher

J. MAXWELL

The Kingfisher is one of our most iconic birds. Although a fairly common species in Scotland, a sighting always comes with something of a thrill - everyone remembers when they first spotted a Kingfisher. And so it was at Baron's Haugh RSPB reserve in mid-August when one appeared low down in a reed-fringed pool in front of the Marsh Hide (Plate 280). Viewing was especially difficult as the bird often darted quickly from one reed clump to another as it dived for fish in and out of our vision. After some time, there was a reasonable chance for a brief photo of a male (Plate 281), but soon after, the whole situation began to change.

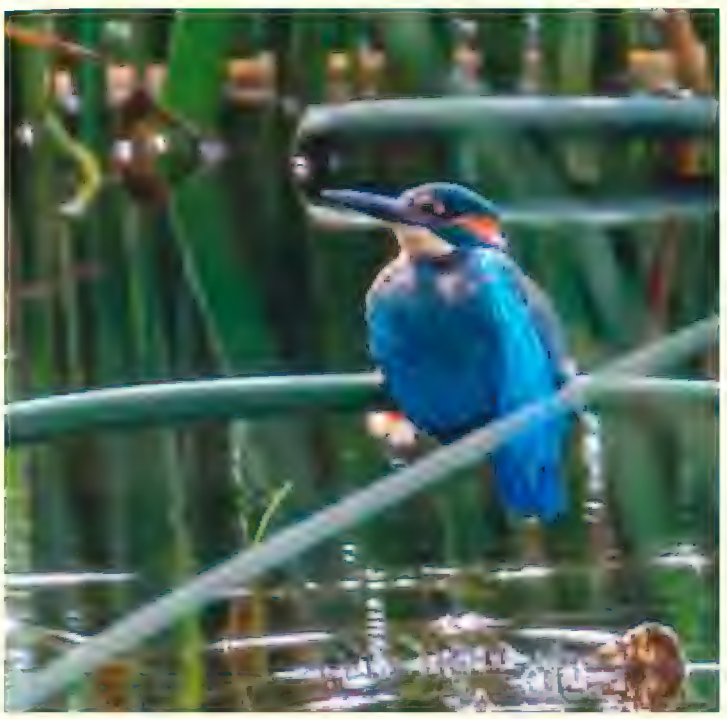

Plate 281. Kingfisher, Baron's Haugh, Clyde, 8 August 2019. © *David Melrose*

It soon became apparent that there was more than one bird at the pool - then to our surprise a third appeared in glimpses through the reed

Plate 282. Two male Kingfishers, Baron's Haugh, Clyde, 8 August 2019. © *David Melrose*

Plate 283. The attack, Baron's Haugh, Clyde, 8 August 2019. © *David Melrose*

Plate 284. Melée on the surface, Baron's Haugh, Clyde, 8 August 2019. © *David Melrose*

Plate 285. Gaining the upper hand, Baron's Haugh, Clyde, 8 August 2019. © *David Melrose*

stems. It was at this point that David Melrose decided to try for a higher viewing position behind the hide to obtain better shots through the reeds. Soon we had established that two males were perched motionless and slightly apart. This reminded me of previous occasions where I had witnessed this kind of threat posturing. They remained thus positioned just above the water for almost half an hour (Plate 282).

Then, the action started and we could hear David's camera springing into life to fast-record the frenzied activity which ensued - a difficult task! The two male Kingfishers flew at one another dropping into the water with one seizing the leg of the other (Plate 283) and both birds flopped around on the surface flapping and stabbing away at each other in a cloud of spray (Plate 284). For a while it seemed as if one bird had gained the upper hand and was mantling over the other's head, seemingly trying to drown its opponent (Plate 285).

But soon it was all over and the two had disengaged and disappeared among the water plants. Thereafter, one bird was seen flying off over the Haugh while another stayed on to continue fishing. The presence of the Kingfishers in the Haugh was probably due to the Clyde being swollen and muddy after heavy rain and therefore proving it difficult for the birds to find their prey. The clear pools of the Haugh were certainly the answer and also the provider of thrills for us, the local birdwatchers!

Jimmy Maxwell
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Blackbird and Slow-worm

D. PALMAR

On 6 June 2019, having completed our Breeding Bird Survey (BBS) second visit in the forest near Inveraray, my wife and I were on our way to Mull to join the RSPB Glasgow Group for a weekend birding excursion. After the Corran Ferry, instead of taking the direct A861 route through Glen Tarbert, we branched off on the B8043 road at Glensanda to Kingairloch. This proved to be a delightful little road, quiet enough to stop and see some birds typical of the area, including a Wheatear, as well as a Green Hairstreak and some Small Pearl-bordered Fritillary butterflies.

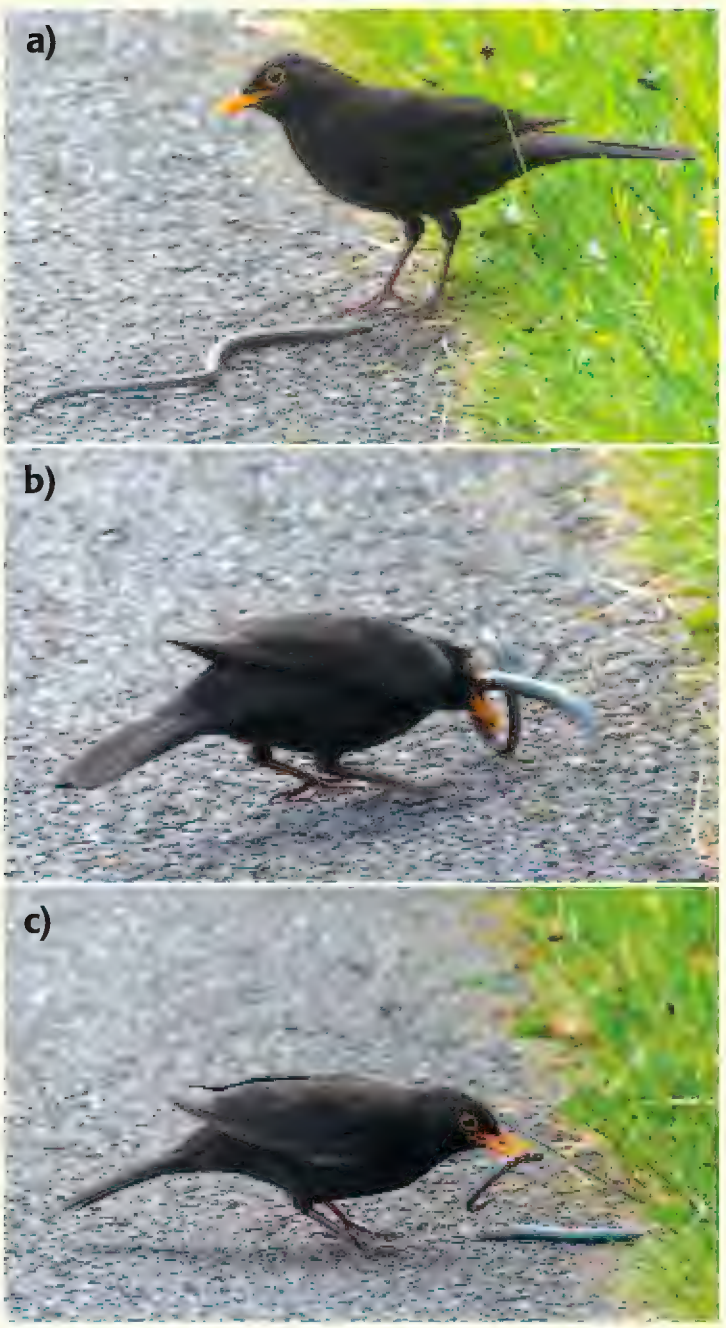

Plate 286 a) Blackbird and Slow-worm, extended showing its length (c. 20 cm). **b)** Blackbird attacking wriggling Slow-worm. **c)** Blackbird picking up the Slow-worm's tail, Kingairloch, Highland, 6 June 2019. © *David Palmar*

At Kingairloch, Highland, we stopped to look at some Red Deer. To our surprise, on the road in front of us an adult male Blackbird appeared, seemingly playing with what looked like a very large worm.

On closer inspection with binoculars, this turned out to be a Slow-worm (Plate 286a). The bird began pecking at the Slow-worm, which wriggled in an attempt to avoid the sharp beak (Plate 286b). The pecking and wriggling carried on for a full two minutes after which the Slow-worm shed its tail (Plate 286c), and the Blackbird flew off with the tail still wriggling in its beak. The tail-less Slow-worm slid off into the grass beside the road.

Given that the length of a typical Blackbird is about 25 cm, it is estimated that this Slow-worm must have measured about 20 cm, which makes it likely to be a young one (an adult being 40 to 50 cm in length).

McInerny & Minting (2016) note that young Slow-worms may be taken by Blackbirds. Adults are vulnerable to Carrion Crows, Buzzards and Honey-buzzards. Dickson (1998) and McInerny (2014) describe the latter two species carrying either a Slow-worm or Adder. Slow-worms have also been recorded being taken by domestic chickens (Service 1902). A Blackbird has been observed elsewhere attacking a Slow-worm (www.youtube.com/watch?v=lNMh_4v0yLg), but it would be interesting to know if others have witnessed this in Scotland.

Reference

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McInerny, C.J. 2014. Honey-buzzard carrying a reptile during display flight. *Scottish Birds* 34: 143.

McInerny, C.J. & Minting, P.J. 2016. *The Amphibians and Reptiles of Scotland.* The Glasgow Natural History Society, Glasgow.

Service, R. 1902. Poultry feeding on slow-worms. *The Annals of Scottish Natural History* 11: 253–254.

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BOOK REVIEWS

The book reviews published in *Scottish Birds* reflect the views of the named reviewers and not those of the SOC.

British Birds: a pocket guide. Rob Hume, Robert Still, Andy Swash, Hugh Harrop & David Tipling. Princeton Press, ISBN 978-0-691-18167-7, paperback, £9.99.

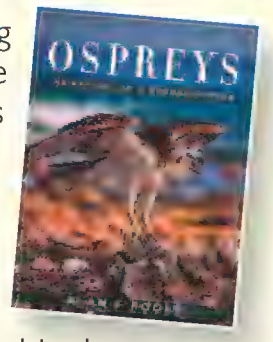
This is a photographic field guide to 300 British bird species, although it concentrates on the 248 that are most likely to be seen in Britain and Ireland. The commoner species get several excellent photos shown in comparable postures, much like a painted field guide. There are some really useful details in the very well-chosen photos and montages: for example, all the owls are shown perched side-by-side and the distinguishing tertial patterns of Herring and Yellow-legged Gulls are illustrated. It is well laid out, with key identification features in the text. The potential drawbacks of using photos for identification are minimised by their high quality and the choice of typical postures, but some niggles remain. For example, although hardly likely to trouble a beginner, the broader white wing bar of the flying Grey Phalarope appears identical to that of the wing bar of the flying Red-necked Phalarope; the Storm Petrel is so poorly lit the underwing bar is not really obvious; the Willow Warbler has a much more rounded head than the Chiffchaff, although the opposite is pointed out in the text. An artist can of course exaggerate these features slightly to make the criteria clearer. Rarer species like Temminck's Stint or Yellow-browed Warbler get only one tiny photo each and the book may just mislead with these species.

All field guides are measured against the current benchmark *Collins Bird Guide*: so, what does this new guide bring to the birding party? First, it is a compact guide suitable to slip into a pocket although the trade-off is that the font size is rather small. Second, it is lively and inspiring, full of real birds that you want to go out and identify. Third it is relatively inexpensive and with a durable cover. In short, it is a great guide for beginners to take in the field (a far cry indeed from the *Observers Book* similarly used by old timers 'back in the day'!). Even for more experienced birders there are details that make it worth keeping handy, particularly when pointing out identification characters to others. This is a perfect stocking-filler for a new birder, but then the following Christmas, get them the *Collins Bird Guide*.

Will Cresswell

Ospreys: the revival of a global raptor. Alan F. Poole, 2019. John Hopkins University Press, Baltimore, ISBN 9781421427157, hardback, 205 pages, £26.50.

Based in the USA, Alan Poole has been one of the world's leading Osprey researchers for over 35 years. His 1989 book on Ospreys was a comprehensive account up to that time and he begins by asking here 'why bother with another book'? The answer is given thoroughly and impressively in this well-produced and very



interesting overview of the Osprey and its four sub-species around the world. He presents the extraordinary amount of information learned in the intervening 30 years, especially from new technology such as satellite tags and nest cameras. No other book contains as much information from everywhere within the bird's almost uniquely global range. He shows how they have recovered from many threats after low points in the early and middle 20th century, often physically helped by specialists in many countries. He describes how Ospreys fish, where they live, their breeding cycle, migrations, their threats and conservation and includes portraits of key Osprey workers around the world (including Scotland's Roy Dennis).

The treasure trove of useful information, much of it drawn from Scottish sources, is supported by excellent full-colour photographs and illustrations. As one who has worked on Ospreys for many years, I learned many fascinating facts. For instance, there are thought to be up to 58,000 pairs globally - perhaps 70% of them in eastern North America and Sweden - with a total post-breeding population of around 130,000. Amazingly, perhaps over 50% of nests are on some kind of artificial structures such as navigation buoys, power pylons and the enormous array of bespoke platforms in the USA, provided especially to encourage breeding and thus, sometimes combined with translocation, to increase their range into suitable habitat.

There are no large tabulations of factual or scientific information and it is not a lengthy species monograph of the kind that is available for an increasing number of birds. However, it is a very well-written, clear and enjoyable account of a bird that has almost universal popularity in the modern world. As stated in the cover description of the book, "few other birds have such a hold on the human imagination. This book shows us why". I recommend it strongly.

Ian Francis

A Sparrow's Life's as Sweet as Ours. Carry Ackroyd and John McEwen, 2019, Bloomsbury, London, ISBN 978-1-4729-6714-5, hardback, £20.00.

What a delightful book! It is adapted from *The Oldie* magazine's Bird of the Month articles, and features some 64 beautiful prints of British birds by Carry Ackroyd, accompanied by fascinating texts written by John McEwen, a co-founder of that magazine. The A4-sized book is divided into the four seasons of the year, though this is not particularly important to the reader's enjoyment. Personally, I would have liked a simpler index at the beginning to lead me to individual species, because many of the birds featured could have appeared in any of the seasons. However, it is very much a book to dip into rather than read from front to back, and all the species are fascinating.

Those of us fortunate enough to live within reachable distance of Waterston House had the opportunity in March of this year to see an Exhibition entitled *Wildlife Printmaking* in which Carry Ackroyd was one of the four artists featured, so I was not surprised by the quality of her illustrations here. They capture each bird's characteristics along with the habitat in which it is normally found. Each one is both accurate yet delightfully simple.

John McEwen's accompanying articles are a delight to read: he includes an obvious ornithological knowledge, but also personal anecdotes, interesting snippets of other authors' writing, of history, and even of poetry going back as far as Chaucer.

I really recommend this delightful book, and it would certainly make a very welcome Christmas present.

Mike Betts

The Seafarers - a journey among birds. Stephen Rutt, 2019. Elliott and Thompson Limited, ISBN 978-1-78396-427-7, hardback, £14.99.

There are some wonderful recent books on seabirds so one might wonder if there is more to say about them. Stephen Rutt has done so, putting his own thoughts and views forward. Inevitably, there are some broad overlaps with other books, for example the threats seabirds face and the fascinating and emerging research into the 'smell' maps that some species navigate by, but this does not detract from one's enjoyment of reading this excellent book.

The Seafarers is essentially a personal journey amongst seabirds, the places they inhabit and the threats and challenges they face. It also sets out the therapeutic value gained by the author from being amongst nature, in particular seabirds and his time as a volunteer at the North Ronaldsay Bird Observatory. He also visits many seabird colonies from Shetland to Pembrokeshire and charts the different species, places and people he encounters. I especially enjoyed his account of the history of Kittiwakes in Newcastle and Gateshead and the juxtaposition of one of the most oceanic of our gulls returning to breed in the heart of a bustling city. This enjoyable book is an impressive debut clearly influenced by the writings of Ronald Lockley and James Fisher with both of whom it bears comparison.

Andrew Bielinski

Also received

The Wren: a biography. Stephen Moss, 2018. Square Peg, London, ISBN 978-1-9109-3193-6, hardback, £12.99.

OBSERVATORIES' ROUNDUP

Observatories' Roundup is a regular bi-annual feature about our bird observatories in Scotland. The intention is to publicise the work of the observatories, visiting opportunities, as well as incidental snippets of news from the islands.

Plate 287. Log at Quoy, with Logan Johnson, Allan Perkins, Richard Cope and David Parnaby, August 2019. © *David Parnaby*

Fair Isle Bird Observatory

Following the devastating start to the season, it is pleasing to be able to report on the progress during the last five months. The Obs site has been cleared by Fair Isle Building Services, a not inconsiderable task, but the removal of the charred remains was a considerable psychological boost as we looked to get on with the ornithological work of the Obs. The FIBOT directors have been hard at work behind the scenes, with a Rebuild Sub-committee established and the appointment of a Project Manager, Susan Clark (who project managed the Fair Isle Electricity Company's recent power project). Further updates on the rebuild process will be regularly posted at: fairislebirdobs.co.uk.

A full list of the staff and volunteers who have helped out during the year can also be found on the website, and Susannah and I are indebted to them all for helping us through the season. With the Parnaby family based at the Schoolhouse and the rest of the wardening team at South Light, there have been changes to the daily routines, but census, ringing and seabird monitoring have continued as close to normal as possible.

Spring census saw some really enjoyable periods of birding, with rarer highlights including the first Franklin's Gull for Fair Isle (originally found from a cruise ship approaching the Isle, although thankfully it was relocated on the island!), Black Kite, Lesser Yellowlegs, Tawny Pipit, two Thrush Nightingales, Rustic Bunting, Blyth's Reed Warbler, Melodious Warbler, two Subalpine Warblers, Red-rumped Swallow, two Citrine Wagtails, White-tailed Eagle, Hoopoe and a peak of 16 Bluethroat (the highest count since 1988). Just as spring was coming to an end, an Eastern Olivaceous Warbler and River Warbler turned up in the Obs nets at the same time on 16 June!

Plate 288. Franklin's Gull, Fair Isle, June 2019. © *David Parnaby*

July saw a few interesting arrivals, including an Arctic Warbler and a record-breaking influx of Two-barred Crossbills (peaking at 16). Also in July, Red-necked Phalaropes were proved to have bred successfully for the third consecutive year, fledging a single chick.

Plate 289. Red-necked Phalarope, Fair Isle, July 2019. © *David Parnaby*

The spring and summer also witnessed a massive arrival of Painted Ladies, with record counts of Peacocks, as well as large numbers of Diamond-back moths and Red Admirals, and the best ever year for Bedstraw Hawkmoths.

Plate 290. Peacock, Fair Isle, August 2019. © *David Parnaby*

Autumn passage began early, with late July seeing three Icterine Warblers recorded, as well as Marsh Warbler and Hawfinch, with the first Barred Warblers equalling the earliest-ever arrival date on 1 August and more Two-barred Crossbills. Westerly winds dominated the early part of the autumn, but there was still Mandarin, Blyth's Reed Warbler, Citrine Wagtail and Greenish Warbler in August. September also saw lengthy spells of poor weather for migration, with a few blasts of easterlies that brought some nice scarcities, although common migrants were generally not present in large numbers. Highlights included Red-flanked Bluetail, a record passage of Barnacle Geese, which peaked at 1,429, and Killer Whales.

At the end of September, the year list stood at a very reasonable 199 (and we're hoping some easterlies forecast for the first week of October bring us a few more additions!).

Seabird monitoring continued as usual in the summer, with a generally productive season for most species. Highlights included the third-highest ever Bonxie total (490 pairs) and good productivity for Arctic Skua (0.64 chicks fledged per pair; the highest total since 2006), Arctic Tern (0.28 chicks fledged per pair; also the highest total since 2006) and Kittiwake (0.67 chicks fledged per pair; the second highest total since 2000). On the downside, Bonxie productivity was low, at just 0.14 chicks fledged per pair.

Plate 291. Arctic Skua fledgling, Fair Isle, August 2019. © *Richard Cope*

Some interesting movements of our Bonxies included our first returning darvic-ringed chick ('2A13', ringed in July 2017 which was seen on the Isle on 24 September) and other 2017-ringed birds seen on pelagics in Brittany and Portugal. Other interesting movements shown by ringing during the year included two Fair Isle-ringed House Sparrows moving to Shetland, a Chiffchaff caught on Fair Isle the day after it was ringed in Norway, a Sparrowhawk that was presumably leaving the country on 25 May that had been ringed on the Isle of May in August 2018, an Arctic Tern ringed as a chick on Fair Isle being found dead almost exactly 23 years later on North Ronaldsay and a Chiffchaff that summered at the Obs that had been ringed in Cheshire in April 2016. A few productive evenings ringing at the Obs saw a record total of almost 100 *alba* wagtails caught (including two ringed earlier in the autumn in Shetland).

Fair Isle remains a fruitful location for research, and a joint FIBO, RSPB, SNH and NTS project began a study into the Storm Petrels of Fair Isle, looking at their breeding distribution and potential threats to the population. The BTO visited to retrieve tags placed on two Arctic Skuas, which will show where these individuals have spent their last two winters. The movements of Guillemots and Razorbills away from their breeding colonies is also being studied by Professor Bob Furness, with a further seven tags retrieved from Fair Isle this summer. A project looking at the Eyebrights of Fair Isle also continued during the year and we supported SNH with their research into sea caves.

Other work the Obs was involved in, included the FIBO 2018 Annual Report being published in August (see the website for details of Friends of Fair Isle to find out how to receive a copy), a team of volunteers attending the Birdfair at Rutland, where the mural was dedicated to Fair Isle (and will be donated to the rebuilt Obs) and the SNH-supported Fair Isle Ranger Service continued to provide a service to visitors to the Isle. Tourism is an important part of the economy of Fair Isle and it's worth noting that there are several islanders who provide accommodation (details are on the FIBO website) and guided walks and other activities are still being provided whilst the Obs is closed (and you've got a good chance of finding your own birds!).

Once again, we'd like to thank everyone for their continued support.

David Parnaby, Warden,
Fair Isle Bird Observatory.
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Isle of May Bird Observatory

Following a positive start to the new season, spring continued in the same upbeat fashion with occasional bouts of easterly winds bringing in some good drift migrants. However, as an island some of the better highlights can be less obvious species such as the Moorhen which favoured the Loch from 5–13 April - it proved extremely welcome as it was the first record since 2002. More expected with spring was the arrival of the first summer migrants with first recorded dates of several key species in March including Chiffchaff (23rd) and Wheatear (28th). April first dates included Blackcap (7th), Ring Ouzel (7th), Swallow (11th), Willow Warbler (16th), Grasshopper Warbler (17th), Whitethroat (17th), Redstart (17th), Tree Pipit (18th), House Martin (19th), Sand Martin (19th), Whinchat (20th), Lesser Whitethroat (22nd), Common Sandpiper (24th) and Pied Flycatcher (25th), whilst the month of May produced the first Sedge Warbler (8th), Garden Warbler (8th), Reed Warbler (9th) and Spotted Flycatcher (14th).

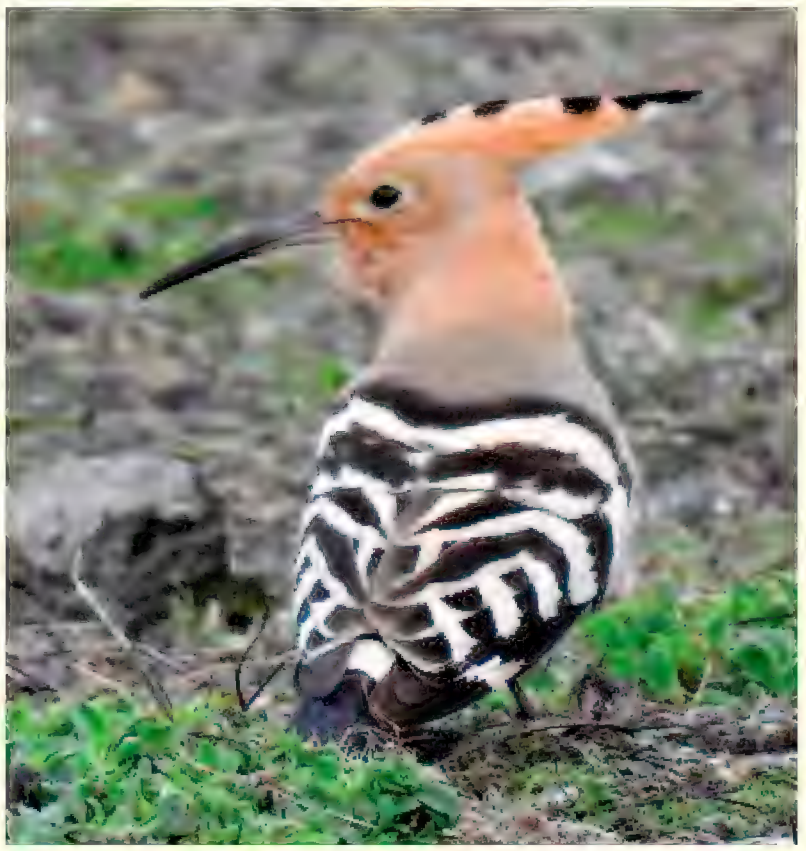

Plate 292. Hoopoe, Isle of May, April 2019. © *David Steel*

The first noticeable highlight of the spring arrived in the form of a Hoopoe which wandered the island on 18 April - the first since 2015. A spell of easterly winds in mid-May then produced a female-type Red-breasted Flycatcher on 16th, and the same evening a Humpback Whale was recorded off the north end of the island. However, the flycatcher was just the start as the following morning a male Bluethroat was discovered on Rona and the floodgates opened with 12 present on 18th, peaking at 15 on 19 May. The majority of birds (11) were adult males with at least three different individuals heard singing. The clear weather allowed birds to move on rapidly although four remained on 20th, and two on 21 May. This was the best showing on the island since the spring of 1994. Following this the final

flurry of spring excitement occurred between 5–8 June with the standout candidate being a Marsh Warbler on 5th, with two Icterine Warblers over a four-day period and a female Red-backed Shrike on 6 June.

As expected, the summer months were dominated by breeding seabirds, with a Quail on 30 June representing the only notable migration highlight. The seabird season was productive with Razorbills showing an all-time peak population of 4,166 pairs, whilst Guillemot numbers increased by 7% from the previous year. Kittiwake numbers remained stable although breeding pairs of Shags continued to fall. Three breeding species of tern - Arctic, Common and Sandwich - all showed welcome increases and had very productive breeding seasons, whilst the specialist 'Tern Terrace' helped attract a single Roseate Tern which paired with a Common Tern. The hybrid pair successfully fledged a chick, which departed the island on 8 August. Other notable breeding seabird news came in the form of the discovery of potential breeding Storm Petrels, with birds heard underground and present for a three-month period. A full census will be undertaken next summer to hopefully confirm breeding.

Plate 293. Collared Flycatcher, Isle of May, September 2019. © *Bex Outram*

The autumn kicked off in style and in an earlier than expected fashion. Late July is not usually the best time for migration with just the first juvenile Willow Warblers filtering through the island and very little else to accompany it. Therefore, it came as quite a shock when the discovery of a juvenile Aquatic Warbler in rank vegetation at the north of the Isle occurred on 27 July. The bird remained for a further two days allowing a total of 20 birders (including a boat of keen Scottish birders) to successfully see this individual. This represented the eighth island record, although the first since 2001, and the earliest ever Scottish record. The same spell of weather also produced a Common Rosefinch, and a Melodious Warbler was caught and ringed on the evening of 30 July - the island's eighth record and first since 2012. It was a tremendous start to the autumn and this laid the foundations of what went on to be a very productive few months.

August produced the usual flurry of south bound waders whilst seabirds departed and it wasn't until early September that migration picked up once again. Just after midday on 8 September, a moulting adult male Collared Flycatcher was caught and ringed at the Top Trap. This proved to be the first ever record of the species for the May and in a plumage only seen once before in the UK. More typical was the arrival of drift migrants such as single Common Rosefinches on 9th and 21 September, whilst a male Siberian Stonechat on 22–23 September was only the fourth island record and the first since 1980. The Isle of May claims the first ever British record with one collected by Baxter & Rintoul on 10 October 1913.

The first whiff of easterly winds produced an arrival of Yellow-browed Warblers with 10 on 22 September, followed by a good number over the following few weeks. Once a notable bird of the autumn, numbers have increased considerably in recent years, demonstrated by the fact that between 24 September to 18 October a total of 33 individuals were recorded with 23 of these caught and ringed.

Another species which has increased nationally in number in the last decade or so is Red-flanked Bluetail, but the arrival of a first-winter on the afternoon of 4 October sent the island into a spin. Despite nearby mainland Fife claiming five

Plate 294. Red-flanked Bluetail, Isle of May, October 2019. © *David Steel*

records, the only previous Isle of May record concerned an individual in October 1975 (only the 12th for the UK at the time). Therefore, the arrival of this individual (the island's second ever) was most welcomed by the 14 people who witnessed it. It was caught and ringed the same day as its arrival and remained for a further two days and was last seen on 6 October. During this five-day spell between 4–9 October other highlights included a Richard's Pipit (on 6th and first since 2015), Shore Lark (5–8th), Red Kite (on 6th and only the eighth island record), Great Grey Shrike (7–9th), and Common Rosefinch (4–5th) amongst many common migrants.

Plate 295. Great Grey Shrike, Isle of May, October 2019. © *David Steel*

The pulse of birds continued throughout October with more Yellow-browed Warblers arriving, whilst the autumn's second Richard's Pipit was seen on 17th, with the island's fifth-ever Blyth's Reed Warbler caught and ringed on 18 October. An approachable fist-winter Great Grey Shrike (the autumn's second) on 19–20 October enjoyed the taste of the island's mice, while a double hit of new birds for the year came in the form of a Long-eared Owl and a Snow Bunting in quick succession on 22nd. The Radde's Warbler trapped and ringed the next day was the island's ninth record and first since 2016. This takes the year list to 171, our third best total, and as we start to head into late autumn there is still the prospect of at least one final good bird before the season is out.

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Plate 296. Kestrel 'XB', North Esk nest box, Lothian, 11 June 2018. © *G. Anderson & K. Burgoyne*

Colour-rings, trail cameras and a Norwegian Kestrel

G. ANDERSON & K. BURGOYNE

The Pentland Hills on the outskirts of Edinburgh is a Regional Park. The area consists of around 10,000 ha of open ground made up of heather, grass moorland and predominantly improved upland sheep farmed land. As members of Lothian & Borders Raptor Study Group, we have been studying Kestrels within this landscape in depth since 2013. This includes finding nesting territories in early spring, detecting nests, recording clutch counts and ringing any young before fledging. All young have been fitted with colour-rings as part of the study.

There had been a study within the area for some years prior to 2013, where boxes were erected and monitored on an *ad hoc* basis. We decided to keep this going and fill in the gaps, working with keen landowners interested in the project. New boxes were erected and areas identified which should hold pairs of Kestrels. Resulting in more than 50 new boxes and baskets being erected. Across the UK, the Kestrel has been in steep decline, with a decline of over 60% since 1995 recorded across Scotland. However, good numbers still exist in the Pentland Hills, we are interested in why the Pentlands population appears to have remained stable.

Within our study area, we have continued to erect new boxes and baskets each year. There are a number of species which regularly use our boxes and baskets including Tawny Owls, Long-eared Owls, Jackdaws and Grey Squirrels - all can displace the Kestrels from our boxes.

We started colour-ringing the Kestrel chicks each year with red/white rings with a two-digit alphanumeric code on the left leg. On the right leg, we fit a BTO metal ring. To date, we have received a small number of records of birds seen or photographed live away from the Pentland Hills. The bulk of the records we have collected ourselves using trail cameras placed at active nests.

In 2016, we experimented with trail cameras at nest sites where we had observed birds with colour-rings. We have had no issues with the birds accepting the cameras at the nest sites. The cameras were fitted in direct line of sight and placed around three meters from the nest. This helped capture pictures of both adults. The cameras can be fitted quickly causing minimal disturbance. We sit back and record the reaction of the birds to the cameras before leaving the cameras to do their work. We have captured some interesting images once the cameras have been retrieved. For example, male XB (Plate 296.). This is one of seven chicks that fledged from a nest near Baddinsgill, Borders, in June 2017. He then nested in 2018 near North Esk, successfully fledging seven chicks of his own. His mate was un-ringed.

Kestrel 'L2' (Plate 297) was ringed as a chick from Harlaw Reservoir in one of our nest boxes during 2016. He then nested in a stick nest at North Esk in 2018, successfully fledging four chicks. In June 2019, he successfully fledged another four chicks from one of our boxes at Greenlaw, Borders.

Using our information so far, we have noted that some of the birds are staying close to their natal sites; this appears to be mostly males. In general, however, the majority seem to be moving further afield. We colour-ringed 105 chicks in 2018, and to date none have turned up at any of the nest sites that we monitored within the Pentlands in 2019. We've had first-year birds nesting this year but these had not been ringed.

Apart from looking to identify breeding adults, the Kestrel nest cameras regularly show up some interesting pictures of different types of prey items brought in. They also capture some unexpected images including Grey Squirrel looking in on the Kestrel incubating her eggs, woodpeckers, crows, Great Tits, pigeons and at night owls all having a look in the nest.

Plate 297. Kestrel 'L2', North Esk, Lothian, 4 June 2018. © *G. Anderson & K. Burgoyne*

Norwegian Kestrel, Listonsheils

During 2019, we downloaded some nice photos from one trail camera of a female Kestrel at a nest box near Listonsheils in the Pentlands. She had what looked like a BTO metal ring on her left leg. On closer inspection we worked out that the ring was from Norway.

Both adults were caught, to allow us to put BTO and colour-rings on the male and a colour-ring on the already ringed Norwegian female - the most aggressive Kestrel I have ever ringed! Her four chicks have taken after her temperament in that respect! Catching the female also helped us confirm our suspicions, giving us the opportunity to read the leg ring properly and get her true identity.

The Norwegian Kestrel was ringed as a chick on 1 July 2018 in Hogland North Trysil, Hedmark in Norway.

Plate 299. Close up of Norwegian ring, Pentland Hills, Lothian, 20 June 2019. © *G. Anderson & K. Burgoyne*

Plate 298. Female Kestrel showing Norwegian ring on left leg, Pentland Hills, Lothian, 13 May 2019. © *G. Anderson & K. Burgoyne*

Plate 300. Female exiting the nest box, Pentland Hills, Lothian, 14 May 2019. © *G. Anderson & K. Burgoyne*

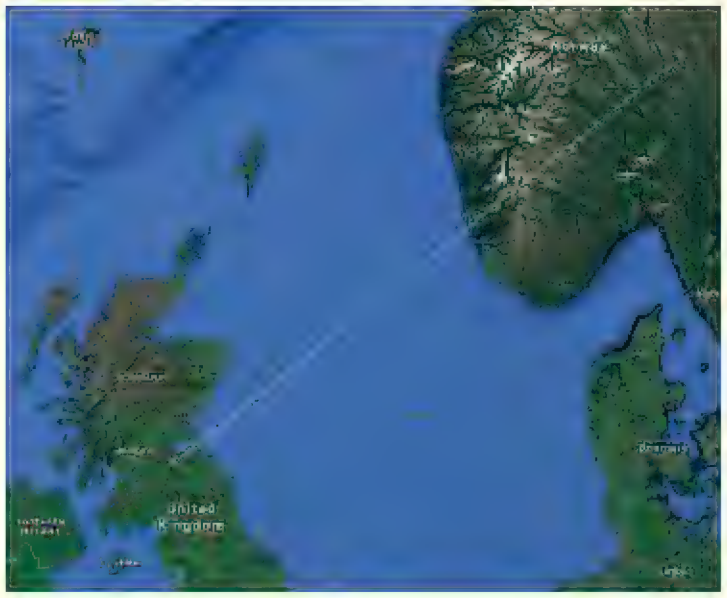

Figure 001. The 1,099 km movement from natal territory to nesting territory.

In 2019, she settled and nested in a box in the Pentlands having travelled over 1,099 km. She laid six eggs and fledged four chicks from the nest. Truly remarkable that this one-year-old female not only made this journey but was successful in her nesting attempt. We hope to see her back in 2020!

Finding this Norwegian Kestrel nesting in the Pentlands was only possible due to the use of trail cameras. This justifies the monitoring method that we have put in place to identify individuals which are marked as part of our project. This bird, along with others identified, makes all the hard work worth while.

Since both birds share nesting duties, the cameras only need to be installed for a minimum of two days to find out if the adult birds are colour-ringed. Sometimes it is difficult to attach and position the cameras in the right place, so we have been attaching a four-foot perch on our nest boxes with the camera mounted on the end, which has worked well for most cameras that we have used. The cameras don't need to be expensive, £50–£60 cameras are ideal, as they only need to capture the colour-ring and digits. We can also zoom in on any picture once the SD card has been retrieved and downloaded onto our computer.

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Plate 301. Todd's Canada Geese, Strathcoul, Caithness, February 2019. © *Rob Hughes*

Two 'Todd's Canada Geese', Strathcoul, 22 February to 3 March 2019 – the first record for Caithness

R. HUGHES, S. MANSON & N. O'HANLON

On 22 February 2019, Sinclair Manson emailed to say that he had seen two Canada Geese with the wintering Taiga Bean Geese (two) and Tundra Bean Geese at Strathcoul, Caithness. Knowing how unusual it is to get Canada-type geese in the county, I was keen to see what type they were, knowing they could actually be vagrant birds coming in with migrant Pink-footed and Greylag Geese. Upon my arrival, the birds were very distant foraging in the short grass. My initial thoughts were that they were notably dark breasted and looked slightly smaller than typical 'British' Canada Geese sparking my interest, so I took a couple of pictures before they fell asleep. I sent a message to Sinclair saying that they appeared to be *interior/parvipes* types and he agreed.

Plate 302. Todd's Canada Geese, Strathcoul, Caithness, February 2019. © *Rob Hughes*

Keen to get better views and images, Nina and I returned the following day. As soon as we got there, the two Canada Geese were in one of the much closer fields with two Taiga Bean Geese, 25 Greylag Geese and ten Pink-footed Geese. We were then able to look at the finer details of the geese and confirm they were 'Todd's Canada Geese'. Whilst there Karen Munro arrived to see the geese and assisted by taking more pictures.

Description

Structurally, they were slightly smaller than typical Atlantic Canada Geese based on their size compared with the surrounding geese. They had awkward-looking gangly necks that had an odd kink in them when foraging. When alert, they stretched their necks vertically raising their heads, which towered over the surrounding birds, confirming the long thin neck again. After seeing so many feral birds in the UK, these stood out as looking quite different.

The bills of both birds were black, long and shallow. The images show the bill is longer and shallower (almost a Whooper Swan's shaped bill) than typical 'Atlantic' Canada Geese. One had a muddied patch at the bill base. The eye and leg colour were both blackish.

Both geese had off-white cheek patches, standing out on a black head and neck. This black created a neck sock. One of the birds had a thin whitish half neck-collar below this on the front (can be present in Todd's). The darkness of the upper breast was one of the most striking features of this individual. The merging of the 'neck sock' into the upper parts is much more subtle than in a much paler Atlantic Canada Goose. Another feature we noted was the absence of any pale colouration at the base of the rear of the 'neck sock'. The darker looking mantle was partly interrupted by lines of narrow pale fringes to the mantle feathers.

The birds remained up until at least 3 March 2019, with the peak wintering/passage of Pink-footed and Greylag Geese reaching 1,128 and 137 respectively during this time period.

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Todd's Canada Goose status in Scotland

*Todd's Canada Goose (*Branta canadensis interior*) is the largest subspecies of Canada Goose which occurs in Britain as a vagrant. The taxonomy of 'Canada Geese' has had a complicated history, with some authors suggesting as many as six species and 200 sub-species, though the American Ornithologists' Union split the complex into two species in 2004: Canada Goose and Cackling Goose, with interior one of seven subspecies of Canada Goose (Cackling Goose has four subspecies). It mostly breeds to the south and SE of Hudson Bay to Baffin Island in Canada and in NW Greenland and winters in the south-eastern part of the USA. The IOC taxonomy adopted for the British list by the BOU since January 2018 follows that recommended by the AOU.*

Due to its complicated taxonomic history, the acceptance of records of vagrant subspecies has been delayed awaiting clarification of this situation and the ID criteria required to distinguish the various forms. The latest BBRC report (Holt et al.*, 2019) is the first to document accepted records of vagrant Canada Geese (and Cackling Geese) but no details are given with the records to differentiate between the subspecies* interior/parvipes. *There are 16 accepted records, from 1986 to 2018, with eight of these in Scotland:*

1986: Argyll, first-year, Islay, 24 October to 3 November
2004: Lothian, first-year, Buteland, 30 December
2007: Outer Hebrides, second-year, Callernish, North Uist, 8 May
2011: Argyll, first-year, Balephetrish, Kenovay and Cornaigmore, Tiree 26 October to 26 March 2012
2012: Dumfries & Galloway, second-year, Loaningfoot, 15 February to 5 April
2013: Dumfries & Galloway, third-year, Southerness Point, 1 January to 2 February (presumed returning bird of 2012)
2016: Dumfries & Galloway, first-year, Caerlaverock WWT & Mersehead, 16–28 November (seen earlier in Northumberland)
2018: Fair Isle, first-year, 16–23 December.

As many birders have long been aware the best place to search for vagrant forms of Canada Geese is among the wintering flocks of Barnacle Geese in West Scotland, particularly on Islay or in Dumfries & Galloway. Apart from a record in Norfolk in 2016 (later seen in Lancashire & North Merseyside in 2017) all other records have been from Cumbria or Northumberland in northern England, and all have been discovered in winter. Many records between 1986 and 2004 await submission and assessment, with vagrant Canada Geese and Cackling Geese reported annually in Argyll, D&G and the Outer Hebrides for many decades.

Reference

Holt, C., French P., and the Rarities Committee. 2019. Report on rare birds in Great Britain in 2018. *British Birds* 112: 556–626.

Plate 303. Moltoni's Subalpine Warbler, Forvie Sands NNR, North-east Scotland, April 2019. © *Phil Crockett*

Moltoni's Subalpine Warbler, Forvie Sands NNR, 28 April 2019 – the first record for North-east Scotland

P. CROCKETT

I had decided to take a walk to check some of the bushes in the northern end of the Forvie reserve, which lies on the north side of the mouth of the Ythan Estuary. There had been good winds from the south-east and east for some days preceding this. I had already seen a few common migrants around Collieston that morning, so had hopes for something unusual. I had even thought to myself that it would be a good time of year for a Subalpine Warbler!

Getting out of my car in the Forvie centre car park, I immediately noted, whilst still only half out of the car, a *Sylvia*-shaped bird atop a nearby small hawthorn bush which stood to the side of the car park. Having reached into the car to get my bins and camera, I was pleased to see the bird still sitting out in the sun. Expecting a Lesser Whitethroat, still needed for my patch year list, I was initially puzzled to see it didn't have a darker mask and was a homogenous light grey in the upperparts. The bird moved to the opposite side of the small bush, so following it round carefully, I soon realised I was looking at a subalpine warbler sp. - I could now see peachy underparts and a white moustachial stripe.

As I followed it around the nearby bushes, and the thin hedge that runs behind the reserve visitor centre, it continued to fly about actively feeding, although sometimes hidden from view for up to ten minutes at a time, it would then show very well indeed for good durations.

Once I had obtained a few decent pictures, and the most local birders had arrived, I put the news out more widely as a female subalpine warbler sp. I discussed its age and sex with Phil Bloor and Hywel Maggs and we concluded that a female was most likely with the amount of brown present in the upperparts, as well as the overall colouration. Later we realised the whitish eye ring also indicated a female.

Aware that our region did not yet have a Subalpine Warbler confirmed to specific taxa (see footnote) - the older records had missed out on this, and likewise with the most recent bird in the region it had not been possible to clarify the identification to taxa - we were keen to conclusively identify this individual. Naturally, I was expecting either Western or Eastern to be most likely, if indeed it proved to be identifiable, so I decided to put the time in, with my priority being good images first of the spread tail, whilst listening out for the call. Having said that, it was steadfastly silent for the first few hours.

Footnote: IOC (and hence BOURC and SOC) currently recognise two species in this complex group - Subalpine Warbler and Moltoni's Subalpine Warbler. Some authorities also split Subalpine Warbler into Western Subalpine and Eastern Subalpine; however, these remain subspecies in the view of IOC.

In the late afternoon, Max Weber and Ian Broadbent reported that they believed they had heard a Wren-like rattle call from the bird. I was further back so hadn't heard it at that point. I wanted to hear it myself, before firmly calling its ID based on that.

Fortunately, it did call again 90 minutes later in the early evening - five times in fairly rapid succession during a two-minute period. I did not capture a recording, and it was never heard to call again, despite the fact that after that I always had a microphone at the ready.

I had heard, with the two other observers present at that point, Gus Routledge and Tony Hilton, a clearly phrased, soft, dry, brief and rather low-pitched, '*zrrrrr*' or '*trrrrr*' call. This was the only call type heard - less strident and not as loud as a Wren. There were no other birds in the part of the large bush it was calling from at that time. The bird was partially visible at the point it called, and I was about 10 m from the bird at this moment. This is a call only known from Moltoni's Subalpine Warbler within the subalpine warbler group.

By this time, I had also reviewed the images I had taken which indicated either a Moltoni's or Western Subalpine Warbler based on the outer tail feathers so we put out the updated news that we were now sure it was a Moltoni's Subalpine Warbler. The bird continued to feed and show well during the last hours before dusk. Unfortunately, it wasn't present the next day.

Plate 304. Moltoni's Subalpine Warbler, Forvie Sands NNR, North-east Scotland, April 2019. © *Phil Crockett*

Description

Size and structure: a small *Sylvia* warbler, albeit with a classic *Sylvia* structure, with a long rather slender tail, though not as long relative to its body as some *Sylvia* species, and with relatively longer wings. Perhaps slightly smaller overall to a *curruca* Lesser Whitethroat, being less stocky and compact than that species. The bill was similar in size to a Lesser Whitethroat. It cocked its tail upwards sometimes for short periods.

Upperparts: overall these were a chalky or pastel shade of light to medium grey, with brown mixed into the mantle and a small amount of brown in the fore-crown. However, these plumage tones, and those of the underparts, are not thought to be of value in distinguishing female Moltoni's from Western and Eastern Subalpine. The tone of the bird also varied markedly with the light, with the amount of brown visible being variable as a consequence.

Head: This showed similar light to medium grey tones to the rest of the upperparts, with some brown tones sometimes visible in the fore-crown. The bird showed a short, white moustachial stripe which was rather tapered at each end. However, this varied substantially in length and shape according to the posture, but was never as long as on some male Western Subalpine's I have seen, nor as thick as male Eastern Subalpine's.

Mantle and rump: the mantle was a light to medium grey, with patches of brown inter-mixed and some areas with apparent moult. Its rump was of a similar tone.

Tail: This was a similar colour to the mantle on the upperside, with brown tones as well. In flight extensive white was apparent in the outer-tail feather and this was confirmed in the photos. The outer tail feathering was of a pre-nuptial moult age with broad rounded tips evident in the photos, albeit inner ones were showing some wear. The outermost feather, t6, showed a complete white tip and wedge down into the feather. In contrast t5 showed a squared off end of white on the tip with no wedge down into the proximal feather evident. There was a much smaller, square tip of white on t4. Only Western Subalpine or Moltoni's Subalpine show this combination.

Plate 305. Moltoni's Subalpine Warbler, Forvie Sands NNR, North-east Scotland, April 2019. © *Phil Crockett*

Plate 306. Moltoni's Subalpine Warbler, Forvie Sands NNR, North-east Scotland, April 2019. © *Phil Crockett*

Wings: these were browner toned than the rest of the upperparts. The primaries in the main appeared of a later generation with less wear and darker grey-brown centres. The inner primaries showed more wear and the coverts were brown to brown-grey. The coverts in the main appeared well worn. The alula was brown-grey with a neat, fresh looking white edging. The tertials also showed a greater proportion of wear than the primaries.

Underparts: these were patchily, but extensively, pale peachy-pink or peachy-buff. The tone did vary according to the light. When in low light the contrast with the moustachial area could almost disappear. The central throat was paler, though there was peachy suffusion from the sides even there. The peachy-pink tones extended a long way down the flanks and right across the breast and upper belly.

Bare parts: the iris was a medium olive-brown colour and was surrounded by a broken, but clear white eye ring with an orangey orbital ring. The legs were an orangey-flesh. The culmen, tip and distal third of the lower mandible were dark grey, with extensive paler flesh-orange in the base of the lower mandible.

Behaviour: the bird was feeding almost constantly in a variety of bushes, but favoured the Hawthorn hedging and small bushes around the pond area. It would sometimes sit motionless and hidden in the bases of the bushes and low vegetation for a few minutes, and also sometimes sit still for a few minutes at a time while sunning itself out in the open. The bird was confiding, and allowed approach to within a few metres on occasion.

Call: as described above, its call was a rather soft, brief, but distinctive, dry '*trrrrr*' or '*zrrrrr*' only uttered on seven occasions during the total duration of the observations.

Moltoni's Subalpine Warbler status in Scotland

There have been ten accepted records of Moltoni's Subalpine Warbler in the UK to the end of 2018, with seven of these in Scotland. The only other Mainland Scottish record is from Highland in 2018. The majority of records relate to adult males, or females in the hand, and DNA analysis of dropped feathers or poop is required for definitive ID in the absence of a heard call (and ideally a sound-recording). The call is likely always going to be essential to identify females or younger birds in the field. It is interesting to note that the majority of accepted records stem from Scotland, in comparison to other parts of the UK.

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Greater Yellowlegs, Tiree, 28 April 2019 – the third record for Argyll

J. BOWLER

28 April 2019 was a dull day on Tiree with a light SE wind and intermittent drizzle. The night before had seen a front arrive from the NW bringing the first rain for many weeks and I was hopeful that some migrant waders might have dropped in to Loch a' Phuill. I headed down to the loch in my car at lunch-time and scoped the loch margins using my window-mounted scope from the track that runs along the southern edge. There were indeed new waders in, including a mixed flock of 120 Ringed Plovers and 60 Dunlin on the adjacent machair, plus five Whimbrel and 26 Black-tailed Godwits on the southern edge of the loch. The light drizzle meant that there was no heat haze and so I scoped the more distant north and west loch shores.

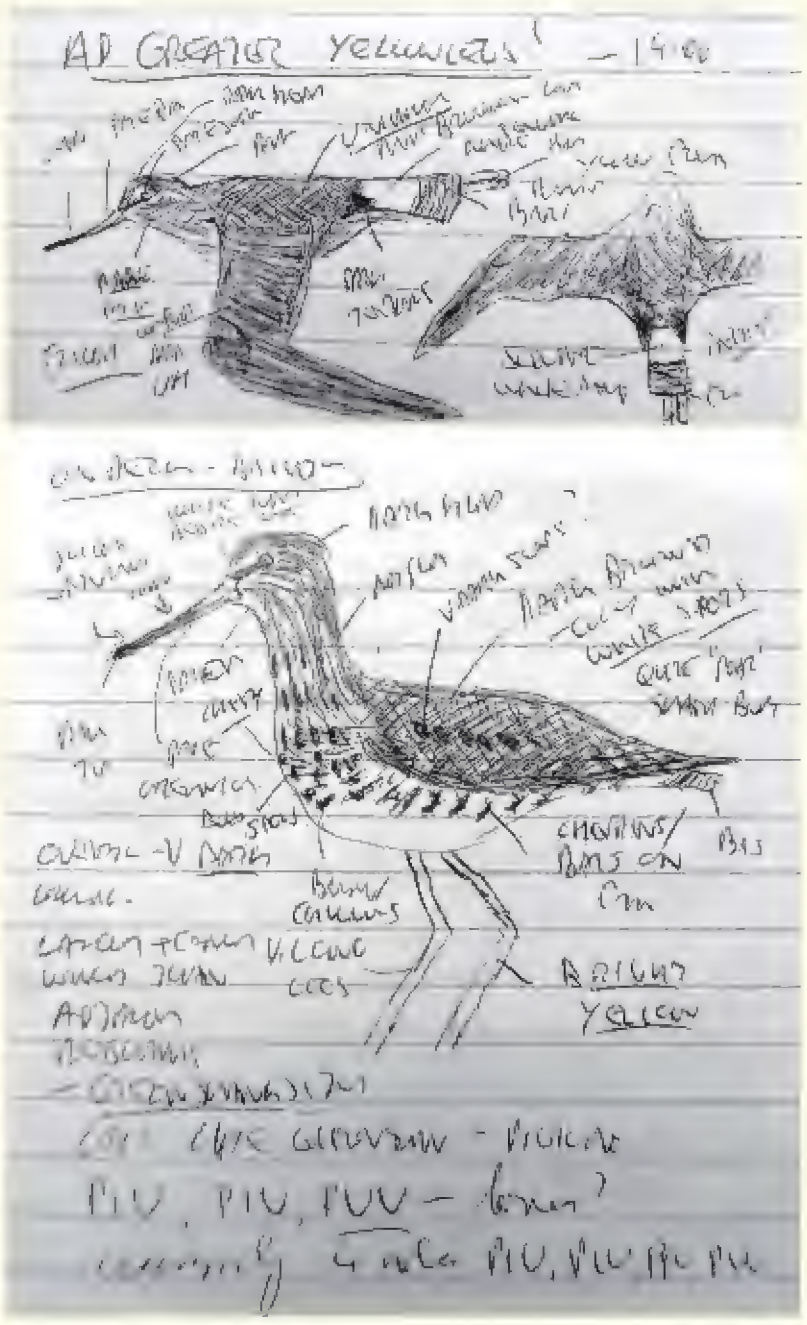

Plate 307. Field sketches. © *John Bowler*

At 12:20 hrs, I picked up a rather large, dark wader in flight as it headed west low along the northern shore. Even at a distance, this bird immediately looked odd. It was strikingly dark above with uniformly dark grey wings, a dark grey mantle and seemingly a dark grey head too. It dropped down into a muddy creek in the NW corner of the loch and disappeared from view. I was perplexed as to the ID of the bird. Size-wise and shape-wise, it looked right for Greenshank, but it had appeared way too dark including the head, whilst there had been no obvious white up the back, instead it seemed to show a square white rump! Just as I was pondering over its ID possibilities, the mystery wader got up in flight once more, this time accompanied by two Redshanks. The bird again flew rather low on rather bowed wings, this time heading towards me as it came south down the NW side of the loch. It was clearly larger than the adjacent Redshanks with broader wings, and its strikingly uniform dark grey upperparts contrasted strongly with the paler Redshanks and their bold white hindwing markings. It circled a little in the small bay where fishing boats are kept and landed with its back to me, revealing a square white rump, a finely dark-barred tail, very long pale legs and a uniformly dark mantle all the way down to the rump. I scoped it briefly on the deck, before once more it headed off away from the loch edge itself and into one of the muddy gullies that fringe the higher winter loch level. Everything I had seen pointed to the bird being a yellowlegs and from its size, I realised that it must be a Greater Yellowlegs!

I therefore immediately drove up the track that runs up the SW side of the loch to the new gate of an apportionment fence there, and before getting out to open it, I checked the loch edges ahead with my bins. Once again, the bird was up

in flight, flying south low along the shore of the boats bay but this time less than 200 m away and drawing closer. Through my bins, I could make out a rather long slightly upturned bill with a paler base, very dark grey upperparts once again with a clean-cut square white rump, very long legs clearly projecting well beyond the tail, a very dark head and a dark grey neck with dark markings extending well down the breast onto the flanks. It was being harassed by territorial Redshanks, which looked small and slender by comparison. The Redshanks had faster wing-beats and more erratic flight than the yellowlegs, which had broader wings imparting a steadier flight. It also called - a clear rather Greenshank-like whistle, which I transcribed as '*Piu, Piu, Puu*' with the last note lower than the first two. The bird landed on top of a small rocky headland on the promontory south of the fishing boat bay about half way up the west side of the loch. Here I was able to scope it briefly with my window-mounted scope. It was strikingly dark grey on the head with a clear whitish supercilium in front of the eye bordered by a dark line below, it bore bold dark spots running down the neck to the breast, where some of these became broad dark chevrons and these extended down the flanks forming bold dark bars. The legs were clearly very long and bright yellow, whilst the tips of the closed wing were slightly longer than the tail. It was a Greater Yellowlegs in adult breeding plumage! I grabbed my bridge camera, but the bird immediately walked down off the top of the promontory and out of sight into a low-lying creek. The bird didn't reappear, so I opened the gate and drove through on the track to get closer to the bird.

The ground on the promontory itself is hummocky with a central pool of open water and is peppered with the nests of many breeding waders, ducks, gulls and swans. I could not leave the track because of all the nesting birds, so I stayed in my vehicle on the track and waited for the bird to re-appear.

Two Redshanks waded out to feed around the fringes of the open pool, but the yellowlegs did not. After 10 minutes of anxious waiting, I decided to move a little down the track to get a different view. Looking through a gap in the hummocks, I picked up the dark head of the yellowlegs and had brief closer views of the head pattern, revealing a paler less marked chin and throat, plus a pale greyish-green base to the long slightly-upturned bill. Once again, however the bird moved out of sight walking south. After waiting for a short while, I reversed back up the track a little in the hope of seeing the bird walking out into the open pool from a slightly higher vantage point. A Redshank flew into the hidden gully and up came the yellowlegs once more, showing very well in flight through the scope at a range of just 50 m - the legs were shockingly long and yellow in flight and the underwing was whitish. The bird called again several times again, subtly different from Greenshank calls, once with a four-note call rather than three. It drifted around low over the point looking like it might finally land on the pool but, harried once more by a Redshank, it carried on and dropped down behind a low ridge on the loch edge just south of the pool.

I waited but the bird did not re-appear, so I drove down the track to where the boats are kept to scope south down the promontory. This gave a good view of the Redshanks on the pool, but the yellowlegs remained out of sight and was presumably feeding in yet another hidden gully. After another 20 minutes of waiting, the bird got up once more, flying a short distance south and calling again before dropping back into dead ground behind a low ridge. This game of cat and mouse was to continue until about 13:30 hrs with the bird occasionally showing briefly in flight at various points on the promontory but then always dropping back down out of sight. I became increasingly frustrated at the birds' inability to show long enough for me to obtain photos. Instead, I sketched what I had seen in my notebook as I waited for the bird to show again. This was the longest wait and the bird appeared to have gone to ground. However, just as the sky started to brighten up, as the drizzle stopped at around 14:00 hrs, the bird suddenly got up from the SE side of the promontory and flew around the point calling, spiralling rapidly higher into the air than I had ever previously seen it do and it headed off high to the west and out of sight. It was not seen again. All in all, this had been an exciting but slightly frustrating find!

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Plate 308. Great Knot, Unst, Shetland, May 2019. © *Allan Conlin*

Great Knot, Unst, 30 May–4 June 2019 – the second record for Shetland

A.M. CONLIN

Despite having been birding for just under 40 years, I had until 2013 never visited Shetland. Whilst the islands had a deserved reputation for pulling in rare birds I was always drawn towards the other rarity hotspot, the Isles of Scilly, in search of American passerines (I never found any!). Ironically, it was a yank vagrant, a Cape May Warbler that first drew me north on 28 October 2013, having arrived back to my home on the Wirral, from the Isles of Scilly. I decided to head north to a set of islands I'd never been to previously, and specifically, to an island I'd never even heard of, an island called Unst! The twitch was a success but like all twitches it was an all too brief visit to somewhere new, and in this case, to an island that had piqued my interest.

Over the next few years I would return to Unst more and more with a view to an eventual permanent move. In 2016, Mrs C had secured a role at the local school and the move looked on, however at the eleventh hour the position fell through and so the move sadly never happened. By this point however, we had already purchased a house; it was a dream house on the shores of Haroldswick Bay. We were loath to sell it so soon after purchase, so instead we made the decision to develop it into a self-catering let during the summer/winter months with B&B for birders during the migration seasons (www.bordanoostlodge.co.uk).

I now return every spring and autumn to Unst, where despite being only a part time 'resident' I've been made to feel very welcome by many of the island's residents namely Messrs Brookes, Cooper and Thomason. They themselves have great track records of finding megas including Yellow-rumped Warbler, Marmora's Warbler and Siberian Thrush respectively.

This year I initially pulled out of my annual spring stay on Unst due to historical spinal issues causing continued and chronic back pain. Fellow Wirral birder and pal David Haigh said he'd take on the house for the last week of May as he'd never previously visited Unst. Dave came to collect the keys to the house and car and I resigned myself to another course of painkillers. As Dave's departure date approached, I began to consider that the pain of him finding something good in the garden of my house, would almost certainly be a far greater pain to me, than any I was experiencing from my back and indeed greater than I could possibly bear… I re-booked my flight!

On 24 May, through gritted teeth and armed with more drugs than a South American cartel (100 ml bottle of morphine and a multi pack of Tramadol) in my hand luggage, I arrived on Shetland to be met by Dave who had arrived on an earlier flight. I jumped, or rather slumped, into the car and we were off, our spring 2019 Shetland adventure had begun! Despite our best efforts the omens weren't good. Within the space of just two hours we'd successfully managed to dip Golden Oriole, Lesser Yellowlegs and a Thrush Nightingale - the latter had vanished overnight. After collecting provisions at the supermarket in Lerwick we headed north to Unst where we faired a little better. In a 24-hour period, we'd seen a drake Green-winged Teal, Otter by the house and an Icterine Warbler in Valyie. However, that was it and what followed was a week of unfavourable winds originating principally from the north and north-west veering occasionally north-east. It was a gruelling week of tough birding with some days producing no migrants at all.

I had spent weeks, months, if not years, boring Dave with tales of Unst; that in the spring it was ace as shrikes and Bluethroats would be dripping from every branch, but it just wasn't to be. I lost count of how many times I must have said "It only takes one bird" or "The big one travels alone", I'm not sure I believed myself as the end of the week approached. The winds were wrong, so we had resigned ourselves to that fact we'd have to accept there were going to be no megas. It seemed no amount of positive talking was going to turn this trip around.

Plate 309. Great Knot, Unst, Shetland, May 2019. © *Rebecca Nason*

By the penultimate day of our bird-free week, the cumulative pain of bad backs, lack of birds and too much walking was beginning to take its toll. Having completed another fruitless circuit of Haroldswick, we were looking for somewhere to go that didn't involve climbing a hill, a barbed wire hurdle or jumping ditches akin to racing in the Grand National. We opted for Skaw. A short drive, followed by a gentle stroll alongside a burn flowing onto a golden beach with aqua marine waters. More importantly, the beach was Skaw, and had an incredible record for producing rarities. That sounded perfect!

On approaching the sands of Skaw Beach, I remembered I needed to make some telephone calls. Contrary to popular myth, I still work when I'm on Unst, and so where mobile signal allows, I'll often take the opportunity to make a few work calls. Skaw, despite being one of the more remote locations on Unst, just happens to be one of the few places where mobile reception is actually pretty good. Peeling away from Dave, I said "I'm just going over here to make some calls". Dave decided to continue along the beach. I was in mid conversation of a call with a client when I noticed a medium sized wader coming in off the sea. With the naked eye, I felt it was somehow different. I'm not sure why or how but instinct just told me this was different. As it continued to head inshore, the largish size and long rakish wings struck me as something that needed further scrutiny. I decided to give it a proper look and lifted my bins to my eyes whilst still chatting to my client. "BLIMEY" I thought or words to that effect… "GREAT KNOT, Dave, Dave" I shouted to Dave and to my client, who was still at the end of the phone! The conversation with my client came to an abrupt end and by the time my mobile was back in my pocket the bird had flown straight on to the beach landing equidistant between the two of us.

It really was a Great Knot; a summer-plumaged stunner. There was no doubt about it; a nice easy straight forward identification. Indeed, the broad black pectoral band that was distinctly visible from distance, was the key feature I had picked up in flight before the bird had landed. I looked up to shout "Dave" again but he was already onto the bird. He looked over and gave me a big thumbs up. As disbelief gave way to excitement the adrenaline kicked in and the legs started to go to jelly. I quickly rattled off a few record shots, just in case the bird decided to leave as quickly as it had dropped in. The bird looked alert, slightly skittish and I like to think fresh in, having overshot its Siberian breeding grounds. It was a tense few minutes during which time neither of us dared to move or even breathe for fear of flushing it. After a few minutes, the bird settled down and started to actively feed and looked comfortable with us being there. Dave and I slowly walked towards each other and in whispered tones we used many expletives! We swore a lot as I recall and after a little bit of self-congratulatory back-slapping and hand-shaking, we put the news out.

Plate 310. Great Knot, Unst, Shetland, May 2019. © *Roger Riddington*

First to arrive was Dave 'super' Cooper, followed by Brydon Thomason, both of whom were kind enough and gracious enough to offer us their congratulations. As the day continued so the crowd grew larger. It was a slightly surreal experience watching so many people come for our special bird, but not any bird, a summer-plumaged Great Knot! Even Mrs C, who had arrived mid-week, drove up to join in with the excitement of the find along with the gathering birders. The bird continued to feed actively amongst the tide wrack for the rest of my stay. It actually proved to be quite tame, often approaching to within 6 m, allowing the big lenses to get some gripping shots, and remained at the site until 4 June.

So, that is pretty much it with regards to the find. I hope I have managed to convey the excitement of our discovery. I am sitting here editing this piece, ironically on the Isles of Scilly!

Plate 311. Great Knot, Unst, Shetland, June 2019. © *Andy Williams*

Plate 312. Great Knot, Unst, Shetland, June 2019. © *Andy Williams*

I still wonder if I'll ever find a mega here but one thing is for sure it will be a long time before I find anything quite as good as that again on Shetland or for that matter, anywhere!

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Great Knot status in Scotland

Great Knot is a Palearctic species which breeds in the sub-Arctic highlands of eastern Siberia. The population is entirely migratory and winters in coastal areas of northern India, Bangladesh, SE Asia, and Australia, with smaller numbers found in the eastern Arabian Gulf states and Pakistan.

There have been five accepted records of Great Knot in Britain to the end of 2018, with one on these in Scotland:

1989: Shetland, adult, Scatness & Pool of Virkie, Mainland, 15 September
1996: Cleveland, adult, Bran & Seal Sands and Greenabella Marsh, 13 October to 5 November
2004: Lancashire, adult, Skippool Creek/River Wyre, 31 July and 16–17 August
2014: Norfolk, adult, Breydon Water, 13–15 July
2016: Norfolk, adult, Titchwell RSPB Reserve, Scolt Head and Holme, 15 June to 4 July.

There is also one record from Ireland - an adult at the Swords Estuary, Co. Dublin on 25 July 2004, with others from Norway, Sweden, Poland, The Netherlands and Morocco.

Immature birds do not apparently return to the breeding grounds until their third calendar year, but remain in the wintering areas, mostly in tropical latitudes. This may be the reason all birds found in Britain have been adults. Birds have been found in two discrete periods - in summer from 15 June to 31 July and in autumn between 15 September and 13 October, and have been at well-watched coastal sites. The Unst 2019 bird is the earliest to have been found by over two weeks. while its six-day stay is shorter than three of the previous records, with the 1996 bird present for 24 days, and the 2016 individual for 19 days.

Plate 313. Calandra Lark, North Uist, Outer Hebrides, June 2019. © *Paul Donald*

Calandra Lark, Paible, North Uist, 3 June 2019 – the second record for the Outer Hebrides

P. DONALD

Premonition is a strange thing. When something remarkable happens, it is all too easy to convince ourselves afterwards that we predicted it would happen. However, it is a matter of record that the last thing I said to my friend (and keen twitcher) Stu Butchart as I left the BirdLife offices in Cambridge for a two-week holiday to the Outer Hebrides was "I'm going to find you a Bimaculated Lark on North Uist next week." What is not a matter of record, though, is that, when I said it, I also thought to myself that it would probably 'only' be a Calandra Lark. I had just been working on the *Melanocorypha* texts for a forthcoming *Helm Guide* to the world's larks that I'm writing with Per Alström, so these big, bulky birds were clearly on my mind.

Fast forward to four days later, and the evening of 3 June. After dinner, my wife Fiona Roberts and I decided to go for a short drive to the beach from our cottage in Knockintorran, Paible, on North Uist. We drove very slowly down a track onto the machair, photographing an obliging Corn Bunting that was moving from fence post to fence post alongside the car. When the fence ended, the bunting flew a short distance into the machair and landed.

A few moments later, at around 20:15 hrs, my wife pointed out a bird sitting on the ground close to the car, announcing it as the Corn Bunting, but she promptly said something about it looked weird. I raised my binoculars to look, and couldn't believe my eyes - there, sitting hunched down on the ground (as larks do when they are alarmed) was a Calandra Lark.

The heavy bill, lack of crest and clear black breast patches clearly pointed to the bird being either a Calandra or a Bimaculated Lark, but the head and bill pattern were, 'unfortunately', clearly Calandra. After a few moments, and some 200 photographs, the bird flew off, showing the characteristic black underwing and giving a dry, rolling rattle, quite different from the calls of the local Skylarks, which seemed upset by its presence and mobbed it in flight.

It landed in a hay meadow and again flushed skywards as we backed up the car, but we saw where it came down. The only local birder's phone number we had on us was that of Steve Duffield, so we called him and, 20 minutes later, he appeared, having broken the Outer Hebrides land speed record on his way. Thankfully, we

were able to relocate the bird for Steve and it eventually landed out in the open on the track, where we watched it for about 15 minutes in fading light, while Steve digiscoped it. It then flew into another long grass field and was lost to sight.

As so often is the case with this species, the small assembled crowd the next morning were destined to be disappointed, as the bird was not seen again. Pending acceptance, this will be the 20th record for the UK, the tenth for Scotland and the second for the Outer Hebrides. It is the latest spring record, too, and the first to occur in June.

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Plate 314. Calandra Lark, North Uist, Outer Hebrides, June 2019. © *Paul Donald*

Calandra Lark status in Scotland

This species breeds from central Iberia and NW Africa eastwards through coastal Mediterranean regions to the Middle East and Turkey through Iran to east Kazakhstan, and up the west side of the Black Sea, through Ukraine and south Russia to NW Kazakhstan. Birds in Europe and NW Africa are resident, though typically form nomadic flocks in winter, but the eastern populations from the Black Sea to Russia and Kazakhstan are wholly or partially migratory, particularly in the north of the range. The winter range of these birds is poorly defined but includes Iran, Iraq and the Middle East south to Sinai.

There have been 19 accepted records in Britain to the end of 2018, with nine of these in Scotland:

1978: Fair Isle, one, 28 April
1994: Outer Hebrides, one, St Kilda, 21 September
1999: Fair Isle, one, 16–17 May
2000: Fair Isle, one, 13 May
2002: Orkney, one, North Ronaldsay, 10–11 May
2006: Isle of May, one, 12–17 May
2007: Shetland, one, Baltasound, Unst, 12 May
2008: Fair Isle, one, 20–22 April
2014: Fair Isle, one, 22 May.

The other ten records have been singles at Portland, Dorset on 2 April 1961; St Mary's, Isles of Scilly on 26–29 April 1985; St Agnes, Isles of Scilly on 17–18 April 1996; Leanness, Isle of Man on 17–18 May 1997; Scolt Head, Norfolk on 19 May 1997; Farne Islands, Northumberland on 28 April 1999; Spurn, Yorkshire on 3 October 2004; Gibraltar Point, Lincolnshire on 11 May 2011, and Sandwich Bay, Kent on 5 May 2012.

The Scottish records are dominated by the five on Fair Isle (55%), with two more in the Northern Isles and singles on the Outer Hebrides and on the Isle of May. As yet none have been found on the mainland. By contrast, the other British records are all from England, and apart from the two on Scilly and one in Dorset, are spread along east coast counties. This pattern suggests that the birds that have been found in Britain have originated from the migratory eastern populations rather than nearer resident ones from southern Europe or NW Africa.

The majority of the English records have been in spring from 2 April to19 May, with just one in autumn on 3 October. The Scottish records mirror this closely but with the spring window of occurrence shifted slightly later and narrower, from 20 April to 22 May, and again just a single autumn record. Most birds have only been seen on the day of discovery (37%), or lingered for two days (21%), with just one present on three days, one for four days and the Isle of May bird for six days. The 2019 North Uist bird is unusual, not just for its location, but in that it is the first British record to be found in June.

Scottish Bird Sightings

1 July to 30 September 2018

S.L. RIVERS

Records in Scottish Bird Sightings are published for interest only. All records are subject to acceptance by the relevant records committee.

The following abbreviations for recording areas are used: Angus & Dundee - A&D; Argyll - Arg; Ayrshire - Ayrs; Borders - Bord; Caithness - Caith; Dumfries & Galloway D&G; Highland - High; Lothian - Loth; Moray & Nairn - M&N; North-East Scotland - NES; Outer Hebrides - OH; Perth & Kinross - P&K; Shetland - Shet; Upper Forth - UF.

The species order is that of the IOC World Birdlist as adopted by BOU on 1 January 2018.

Rose-coloured Starlings continued to be widely reported, but the biggest influx was the unprecedented numbers of Two-barred Crossbills in July. The returning American White-winged Scoter was again off Musselburgh from July. There was a good showing of Nearctic waders, and a Cliff Swallow also made the Atlantic crossing to put itself on the Scottish List.

Taiga Bean Goose: 11 flew SW over Cruden Bay (NES) on 15 September. **Snow Goose:** an adult white-morph was on St Kilda (OH) on 11–13 September; two at Balranald RSPB Reserve, North Uist (OH) from 17 September into October: one at Loch Leven (P&K) on 18 September, and one at Aberlady Bay (Loth) on 24 September. **Ruddy Shelduck:** three were at Cambus (UF) on on 7 August; one at Loch Leven (P&K) on 2–3 September, and one at Blackness (UF/Loth) on 11–15 September. **Blue-winged Teal:** the eclipse drake was at Frankfield Loch, Glasgow (Clyde) from June to 1 September & 23 September into October. **Black Duck:** the regular drake at Strontian (High) was reported throughout the period. **Ring-necked Duck:** adult drakes were at Loch of Skene (NES) on 10 September, and at Loch Leven (P&K) on 16–27 September. **Lesser Scaup:** the drake remained at Mire Loch, St Abb's Head (Bord) to 11 July. **American White-winged Scoter:** the returning drake was off Murcar Links/Blackdog (NES) from 2 July to 19 August. **Surf Scoter:** an adult drake was off Musselburgh (Loth) from 13 July to 1 September, with a female also there on 17 July and 27–31 August and on 9 September, and a drake was at Lunan Bay (A&D) from 5 August into October, with two there on 12th and 18–22 August. **King Eider:** the regular drake was again off Nairn (M&N) from 20 July to 6 August.

Wilson's Petrel: one was seen from the Mallaig to Lochboisdale ferry (High/OH) on 25 August. **Albatross sp.:** one flew north past St Abb's Head (Bord) on 22 September. **Cory's Shearwater:** one flew north past Barns Ness (Loth) on 18 September. **Great Shearwater:** one flew north past North Ronaldsay (Ork) on 18 September. **Balearic Shearwater:** two flew south past Corsewall Point (D&G) on 18 August; and singles flew past Kinnaird Head (NES) on 4 September; past Balnakeil (High) on 15 September; past Scoughall (Loth) on 18 September; past Embo (High) on 21st, and past Tyninghame (Loth), Girdle Ness, Aberdeen (NES) and Collieston (NES) all on 29 September. **Barolo Shearwater:** one flew SW past Corsewall Point (D&G) on 18 August.

Pied-billed Grebe: the returning adult was still at Loch Feorlin, near Lochgilphead (Arg) to 18 July. **Spoonbill:** five remained in Tyninghame Bay (NES) from June, with six present on 13–31 August; singles were at the Ythan Estuary (NES) on 2–3 July; at Montrose Basin (A&D) from 2 July to 7 August: at Findhorn Bay (M&N) on 1–15 August; at Guardbridge (Fife) on 1st & 19–20 September; at Greenan (Ayrs) on 4 September, and at Skinflats Pools/Kinneil (UF) on 24 September. **Little Egret:** generally under-reported, but nine at Guardbridge (Fife) on 28 August was a record count for the county, until 12 were present there in September, and one was again at Baltasound, Unst (Shet) on 6 August and 17–22 September - the furthest north in this period. **Great White Egret:** singles were on the Ythan Estuary (NES) on 22 July; at Morton Lochs LNR (Fife) on 13 September; at Loch of Strathbeg RSPB Reserve (NES) on 15 September; at the Ythan Estuary again on 22–30th; at Caerlaverock WWT Reserve (D&G) on 23–24th; near Dingwall (High) on 24th; at Inchgarth, Aberdeen (NES) on 24–26 September; at Pennyghael, Mull (Arg) on 24–26th; at Halkirk (Caith) on 25th; at Baron's Haugh RSPB Reserve/Carbarns Pools (Clyde) on 28–30th, and at Deeside Golf Course, Aberdeen (NES) on 28–30 September.

Honey-buzzard: one flew over Portobello (Loth) on 27 July; with other singles at Aberdour (Fife) on 1 August; near Grantown-on-Spey (High) on 20 August; south over Bonnyrigg (Loth) on 22 August; on Fair Isle on 25 August and 1 September; over Aberfeldy (P&K) on 10 September, flying inland at Sands of Forvie NNR (NES) on 13 September, and over Dunfermline (Fife) on 25 September. **Pallid Harrier:** one was at Dale of Walls, Mainland (Shet) on 27 August. **Rough-legged Buzzard:** one was near Alyth (P&K) on 7 September. **Spotted Crake:** one was at Levenwick, Mainland (Shet) on 27 September. **Crane:** two were at Twatt, Mainland (Shet) on 7–18 July; three at the Ythan Estuary (NES) on 8–31 July and 22–26 August; two at Bixter, Mainland (Shet) on 30 July; three at Slains Pools (NES) on 12 August; two at Loch of Strathbeg RSPB Reserve (NES) from 14 August, three from 12 September and five from 15 September; two at Mailand, Unst (Shet) on 1 September; two at Funzie, Fetlar (Shet) on 1 September; two at Bakkasetter/Loch of Brow, Mainland (Shet) on 1 September; two at Loch of Hillwell, Mainland (Shet) on 1–2 September; two at Sandwick, Mainland (Shet) on 2–9th and 16–17 September; two at Hoswick, Mainland (Shet) on 10th, and two at Threave Estate (D&G) on 19 September.

Black-winged Stilt: a juvenile was at Foulden, near Chirnside (Bord) on 29 August. **Pacific Golden Plover:** an adult was on Westray (Ork) on 28 July. **American Golden Plover:** one was at the Ythan Estuary (NES) on 14 August; one at Brough, South Ronaldsay (Ork) on 22 August; one at Cullivoe, Yell (Shet) on 1–29 September, with two there on 15–16th and 20th; one at Burness, Sanday (Ork) on 9th and 16–17 September, with two there on 18–22nd, and one still on 23–30th; then singles were at Ormiclate, South Uist (OH) on 10th and 17–21st; at Uyeasound, Unst (Shet) on 13–28th; at Balranald RSPB Reserve, North Uist (OH) on 16th; at Sollas, North Uist on 17–18th; at Baleshare, North Uist on 17–20th; near North Collafirth, Mainland (Shet) on 19–20th; at Balemore, North Uist on 19th; at Machir Bay, Islay (Arg) on 20th; at Inch Point, Newburgh (NES) on 21st, and one at Baugh, Tiree (Arg) on 26th. **Hudsonian Whimbrel:** one was on Hirta, St Kilda (OH) on 7–17 September. **Temminck's Stint:** one was at Wilderness GP, Ladybank (Fife) on 31 July. **Baird's Sandpiper:** one was at Vaul, Tiree (Arg) on 3rd and 7 September, and at Gott Bay, Tiree on 12th; one was on Foula (Shet) on 18–30 September. **White-rumped Sandpiper:** two were at Loch of Strathbeg RSPB Reserve (NES) on 17–18 July; then singles were at Caolas, Vatersay (OH) on 22–23 July; at Aberlady Bay (Loth) on 2 August; at Skateraw (Loth) on 4 August; at Pilanton Burn (D&G) on 4 August; at Ardvule Point, South Uist (OH) on 5–6th; at Loch of

Plate 315. Baird's Sandpiper, Foula, Shetland, September 2019. © *Mark Wilkinson*

Strathbeg RSPB Reserve on 6th & 10 September; at Balranald RSPB Reserve, North Uist (OH) on 11th; at Esha Ness, Mainland (Shet) on 16th; one at Kilaulay/Eochar, South Uist on 17–18th; at Barvas, Lewis (OH) on 16–17th; at Leverburgh, Harris (OH) on 21st; and one at Skinflats Pools (UF) on 29–30 September - the first for the UF recording area. **Buff-breasted Sandpiper:** singles were at Fleck, Mainland (Shet) on 11–18 September; at Loch a'Phuill, Tiree (Arg) on 15 September; at Kildonan, South Uist (OH) on 17th; at Balranald RSPB Reserve, North Uist (OH) on 17th; and Sollas, North Uist on 18–19th and 27th; two at Baleshare, North Uist on 20th; one on North Ronaldsay (Ork) on 20th; on Foula (Shet) on 21st, and at The Range, South Uist (OH) on 29 September.

Pectoral Sandpiper: singles were at Kentra Bay, Acharacle (High) on 14 August; at Musselburgh Lagoons (Loth) on 18–27 August; at Ardvule, South Uist (OH) on 30 August to 3 September; at the Range/West Gerenish, South Uist on 30 August to 10 September; at Loch Bornish, South Uist on 31 August to 1 September; at Craigens, Loch Indaal, Islay (Arg) on 4 September; at Corsewall Point (D&G) on 5 September; at Baron's Haugh RSPB Reserve (Clyde) on 8–10 September; at Borve, North Uist (OH) on 11th; at Loch na Keal, Mull (Arg) on 12–16th; at Esha Ness, Mainland (Shet) on 16th; one at the Range, South Uist on 16th; at Wats Ness, Mainland (Shet) on 17th; at Eochar, South Uist on 18th; on Fair Isle on 26–30th, and one at Loch Ordais, Lewis (OH) on 30 September. **Semipalmated Sandpiper:** a juvenile was at Balgarva/Carnan, South Uist (OH) on 11–20 September; one at Seilebost, Harris (OH) on 11th; and one at Grutness and Pool of Virkie, Mainland (Shet) on 28–30th. **Long-billed Dowitcher:** one was at the Butt of Lewis, Lewis (OH) on 11 September, and one at the Range, South Uist (OH) on 15–22th.

Great Snipe: one was at Boddam, Mainland (Shet) on 17 September. **Red-necked Phalarope:** four were on North Ronaldsay (Ork) on 8–9 July; one at Lamba Ness, Unst (Shet) on 14 August, with two there on 15–18th, and one at Boddam, Mainland (Shet) on 18th. **Grey Phalarope:** one flew past Mull Head, Papa Westray (Ork) on 7 July; one past Hynish, Tiree (Arg) on 21 August; one south past Ardvule, South Uist (OH) on 2 September; one was at Blackwaterfoot, Isle of Arran (Clyde Islands) on 3rd; and singles off Banks, Birsay (Ork), off Aird an Runair, North Uist (OH), off Aird, Tiree, and off Machrihanish, Kintyre (Arg) all on 4th; and off Labost, Lewis (OH) on 5th. Four were at Dunnet Bay (Caith) on 15th; one was in Bluemull Sound, from the Fetlar ferry (Shet) on 16th, and one off Out Skerries (Shet) on 26 September.

Sabine's Gull: an adult was off Esha Ness, Mainland (Shet) on 11 August; one flew past North

Plate 316. Sabine's Gull, Stinky Bay, Benbecula, Outer Hebrides, September 2019. © *Angus Hogg*

Ronaldsay (Ork) on 5 September; singles were at Dunnet Bay (Caith) on 13 and 15–16 September; off Ardvule, South Uist (OH) on 13th; off the Swona ferry (Ork); off the Uig–Lochmaddy ferry (High/OH), and off Balivanich, Benbecula (OH) on 14th; two off Labost, Lewis (OH) on 15th; one flew past Mull Head, Papa Westray (Ork) on 15th; one was at Stinky Bay, Benbecula on 15–16th; one off Priest Island, seen from the Ullapool–Stornoway ferry on 16th; two off Corsewall Point (D&G) on 16th; one off St Abb's Head (Bord) on 17th; one past North Ronaldsay on 18th; one off Eyemouth (Bord) on 19th; one off Inverbervie (NES) on 20th; one at the Lossie Estuary (M&N) on 22nd; one past St Cyrus (NES) on 25th; one past Peterhead (NES) on on 28th; one off Fishtown of Usan (A&D) on 29th, and one north past Barns Ness (Loth) on 29 September. **Mediterranean Gull:** very few reported away from the Firth of Forth, though a juvenile made it as far as Unst (Shet), being seen Norwick on 31 July and 1 August and at Baltasound on 6 August. **Glaucous Gull:** very low numbers reported, with about five in July - all on the Outer Hebrides except for one near Finstown, Mainland (Ork) on 23rd. Only four in August all on the Outer Hebrides, and two in September - at Castlebay, Barra (OH) on 9th, and on Foula (Shet) on 23rd. **Iceland Gull:** also very low numbers seen, with two in July (Shet & OH), four in August (Shet, OH & two in A&D) and about 10 in September from Shetland to Lothian and Barra (OH), where one was present at Castlebay/Craigston from August to 25 September. **Yellow-legged Gull:** one was at Loch Pooltiel, Skye again on 16 July; one at Loch Ryan (D&G) on 24 July; at Dumbarton (Clyde) on 6 August; at Loch Pooltiel again on 12 August and throughout September.

Gull-billed Tern: one flew north past Inverbervie (NES) on 25 July, and it, or another, was nearby at Cruden Bay and Peterhead (both NES) on 30th. **Black Tern:** singles were on North Ronaldsay (Ork) on 3rd, 8th and 30 July; while August produced over 30 all off the east coast from North-east Scotland to Lothian, with higher counts of four past Fife Ness (Fife) on 1st; six past Cambo (Fife) on 9th; two at Arbroath (A&D) on 13th; two off Outhead, St Andrews (Fife) and four off Musselburgh Lagoons (Loth) on 31st; and September had up to 27, from Highland to Lothian, with higher counts of two off the Isle of May on 4th and two at Blackness (Loth/UF) on 15 September, except for two past Saltcoats (Ayrs) on 11th and one at South Bay/Ardvule, South Uist (OH) on 23 September. **Whiskered Tern:** one was at Baleshare, North Uist (OH) on 29–30 September. **White-winged Black Tern:** an adult was at the Ythan Estuary (NES) on 28 July.

Pomarine Skua: seven reported in July - all singles from Ullapool (High) to Barra (OH) and Cruden Bay (NES) to Eyemouth (Bord); eight noted in August, on the east coast from Esha Ness, Unst (Shet) to Eyemouth (Bord), and four on the Outer Hebrides including the high count of two past Pollacher, South Uist on 30th. In September, there were over 120 in September from Foula (Shet) to Eyemouth (Bord) and Lewis (OH) to Southerness (D&G), mostly singles, but with higher counts of four off Ullapool (High) on 7th; five off Strathy Point (High) on 15th; four past Papa Westray (Ork) on 18th; five past St Abb's Head (Bord) on 18th; eight past Collieston (NES) on 22nd; four past Girdle Ness, Aberdeen (NES) on 23rd, and four past Fort George (High) on 25 September. **Long-tailed Skua:** one flew past North Ronaldsay (Ork) on 5 July; one passed Stronsay (Ork) on 13 July; three flew over St Andrews and one over Ferryhill (both Fife) on 31 July, and three flew past the Ullapool–Stornoway ferry (High–OH) on 26 August. In September, over 30 were reported, mostly down the east coast from Esha Ness, Unst (Shet) to Eyemouth (Bord) with higher counts of five past North Ronaldsay (Ork) on 18th, and three past North Queensferry (Fife) on 29th, and singles passed the Ullapool–Stornoway ferry on 6th, and off Strathy Point (High) on 15th on the west coast.

Turtle Dove: singles were at Newburgh (NES) on 7 July; at Skinflats Lagoons RSPB Reserve (UF) on 4 August; at Ormiclate, South Uist (OH) on 11 September; two at Castlebay, Barra (OH) on 19 September; at Cleatt, Barra, and at Brevig, Barra on 20th into October; near Nerabus, Islay (Arg) on 20 September; one at Ardivachar, South Uist (OH) on 21st; at Grogarry, South Uist on 22nd; at Sollas, North Uist (OH) on 22nd into October; at Quendale, Mainland (Shet) on 22nd and 27th; at Snishival, South Uist on 23rd; at Balranald RSPB Reserve, North Uist on 24th; at Brough, Whalsay (Shet) on 27th; at Stoneybridge, South Uist on 27th, and at Middlequarter, North Uist (OH) on 29th. **Snowy Owl:** one was seen several times on St Kilda (OH) from July into October. **Common Nighthawk:** one was near Appin (Arg) on 11 September. **Nightjar:** one flew over Fair Isle on 18 September. **Alpine Swift:** one was at Skaw, Unst (Shet) on 27 September. **Blue-cheeked Bee-eater:** one was seen at Achnahaird (High) on 23 June - the second Scottish record, with presumed same near Stornoway, Lewis (OH) on 25 July. **Bee-eater:** one was near Inverbervie (NES) on 5 July. **Hoopoe:** one was at Tofts Ness, Sanday (Ork) on 28th September. **Wryneck:** one was on Fair Isle on 5–6th September, three on 8th, and one still on 9–10th; singles on Papa Westray (Ork) on 6th; at Stromness, Mainland (Ork) on 7th; at Langass

Plate 317. Cliff Swallow, Skye, Highland, August 2019. © *Sam Langlois Lopez*

Lodge, North Uist (OH) on 22–23rd; at Baltasound, Unst (Shet) on 22nd; at Setters Hill, Unst on 24th, and on Fair Isle on 27–28th. **Hobby:** singles were on North Ronaldsay (Ork) on 25 July; at Glen Quaich (P&K) on 13 August; at Cairnbulg (NES) on 30 August, with presumed same at St Combs (NES) on 31st; at Eassie (A&D) on 11 September, and Loch of Hillwell, Mainland (Shet) on 28th.

Brown Shrike: one was on Out Skerries (Shet) on 28 September. **Red-backed Shrike:** a female was on Fair Isle on 17–25 August; one at Easting Beach, Unst (Shet) on 26 August; one on North Ronaldsay (Ork) on 7th and 10–11 September; one on Fair Isle on 10–11th; a male at Burness, Sanday (Ork) on 10–17th; one at St Cyrus (NES) on 19–20th; one on Fair Isle on 24–25th; one at Burravoe, Yell (Shet) on 24–27th; one on North Ronaldsay on 26–30th, with two on 29th; one was at Glenastle/The Oa, Islay (Arg) on 29th, and one at Lopness, Sanday on 29–30th. **Daurian Shrike:** one was at Levenwick, Mainland (Shet) on 28–29 September. **Woodchat Shrike:** a juvenile was on Papa Westray (Ork) on 10 September. **Golden Oriole:** one was at Avonvogie, Islay (Arg) on 4 July. **Shore Lark:** one was on North Ronaldsay (Ork) from 12 July into October; one on St Kilda (OH) on 11 September was possibly of North American origin ('Horned Lark'). **Short-toed Lark:** one was at Lamba Ness, Unst (Shet) on 23–29 September. **Cliff Swallow:** one was at Milovaig, Isle of Skye (High) on 27 August - the first record for Scotland.

Western Bonelli's Warbler: one was at Bolnabodach, Barra on 12–19 September - the first record for the Outer Hebrides. **Yellow-browed Warbler:** the first of the autumn was one at Scatness, Mainland (Shet) on 9–21 September, with the first wave arriving on Shetland on 21st, and over 700 were reported by the end of the month. Most were on the Northern Isles, but sightings spread as far as Borders and Argyll, with 'inland' records penetrating as far as Dalmeny (Loth) on 29th and Longhaugh Point, near Bishopton (Clyde) on 30 September. Mostly singles, but highest counts were: 14 on Out Skerries (Shet), 11 at Loch of Strathbeg RSPB Reserve (NES) and 10 on the Isle of May on 23rd; 16 at Baltasound, Unst (Shet), 21 on the Isle of Bressay (Shet), and 10 on Fair Isle on 24th; 10 at Geosetter, Mainland (Shet) on 25th; 25 at Symbister, Whalsay (Shet), 18 at South Nesting, Mainland (Shet), 17 at Sandwick Mainland (Shet) and 16 on North Ronaldsay (Ork) on 27th; and 11 on Fetlar (Shet), 12 on Fair Isle and 13 on Sanday (Ork) on 28 September. **Greenish Warbler:** singles were at Scatness, Mainland (Shet) on 1 August; at Frakkafield, Mainland (Shet) on 26–28 August; on North Ronaldsay (Ork) on 26–28 August; on Fair Isle on 27 August; at Torry Battery, Aberdeen (NES) on 10 September, and at Levenwick, Mainland (Shet) on 27 September. **Arctic Warbler:** one was on Fair Isle on 13–16 July, and on the Isle of May on 23 September. **Great Reed Warbler:** one was at Burrafirth, Unst (Shet) on 27 July, and one at Rerwick, Mainland (Shet) on 10 August. **Aquatic Warbler:** one was on the Isle of May on 27–29 July. **Blyth's Reed Warbler:** one was still at Halligarth, Unst (Shet) to 5 July; one there again on 17 August; one on Fair Isle on 18–20 August; singles at Baltasound, Unst and Rerwick, Mainland (Shet) on 18 August; at Hillswick, Mainland (Shet) on 24th, and at Bruernish, Barra (OH) on 24–27 September. **Marsh Warbler:** singles were at Halligarth, Unst (Shet) on 4 July; at Sumburgh Head, Mainland (Shet) on 8 July; on North Ronaldsay (Ork) on 9th; on Fair Isle on 29 July to 3 August, and 30 August to 1 September; on North Ronaldsay on 10th and 18–20 September, and at Feal, Fetlar (Shet) on 28 September. **Booted Warbler:** one was on Stronsay (Ork) on 10 September.

Melodious Warbler: singles were on the Isle of May on 30–31 July; on North Ronaldsay (Ork) on 25–26 August; at Cullivoe, Yell (Shet) on 24 September, and on Out Skerries (Shet) on 25–29 September. **Icterine Warbler:** one was on Fair Isle on 28–30 July, with two there on 31st; then singles on North Ronaldsay (Ork)

on 1 August; at Reay/Sandside Bay (Caith) on 4 August; on Fair Isle on 15th and 28 August; at Burrafirth, Unst (Shet) on 16–17th; at Sumburgh, Mainland (Shet) on 28 August to 2 September; at Scatness, Mainland (Shet) on 1 September; on Fair Isle on 9 September, and at Esha Ness, Unst on 11 September. **Barred Warbler:** first of the autumn was one on Fair Isle on 1–6 August, with two there on 5th; then singles at Bakkasetter, Mainland (Shet) on 6 August; on Fair Isle on 15–22 August, with three there on 23rd,and two still on 25th; at Sumburgh, Mainland (Shet) on 25–29th; on North Ronaldsay (Ork) on 25–26th; at Finstown, Mainland (Ork) on 26th; at Toab, Mainland (Shet) from 26 August to 1 September; two at Walls, Mainland (Shet) on 27th; one on the Isle of Noss (Shet) on 28th; at Grutness, Mainland (Shet) on 28th; at Northdale. Unst (Shet) on 28th; at Lerwick, Mainland (Shet) on 29th, and on Fair Isle on 30 August. In September there were seven on Shetland, at least four on Fair Isle, and at least 12 on Orkney, while elsewhere one was at Barns Ness (Loth) on 10–12 September; at Peterhead Bay (NES) on 11th; at Melvich (High) on 19th; at Girdle Ness, Aberdeen (NES) and at St Abb's Head (Bord) on 23rd; at Askernish, South Uist (OH) on 24th, and at Kilminning, Fife Ness (Fife) on 28–30 September. **Subalpine Warbler:** a female was on North Ronaldsay (Ork) on 24 August, and one at Bornish, South Uist (OH) on 7–27 September.

Rose-coloured Starling: one was still at Grimsay (OH) to 10 July: singles were at Boath Park, Nairn (M&N) on 1–5 July; at Lerwick, Mainland (Shet) on 2–9 July; at Elgin (M&N) on 3–6th; on Foula (Shet) on 8–9th; at Eyemouth (Bord) on 9th; at Luskentyre, Harris (OH) on 9th; at Barvas, Lewis (OH) on 9–15th; at Houbie, Fetlar (Shet) on 10th; at Craighouse, Jura (Arg) about 10–13th; at Balissta, Unst (Shet) on 13th; at Skaw, Unst on 18–25th; at Bedersaig, Harris on 19th; at Lybster (Caith) on 25th; at Brae, Mainland (Shet) on 27th; at Norwick, Unst on 28th; at Reiss (Caith) on 30 July; on North Ronaldsay (Ork) on 8 August; at Loch Euphort, North Uist (OH) from 12 August to 4 September; at Carinish, North Uist (OH) on 19–26 September, and at Claddach Baleshare, North Uist on 24 September. **Bluethroat:** singles were at Norwick, Unst (Shet) on 10–16 September, and at Loch of Hillwell, Mainland (Shet) on 28th. **Nightingale:** one was at Geosetter, Mainland (Shet) on 25–27 September. **Red-flanked Bluetail:** singles were on Fair Isle on 23 September; on North Ronaldsay (Ork) on 24th, and on Foula (Shet) on 24–27th. **Collared Flycatcher:** an adult male was on the Isle of May on 8 September - first record for the island. **Red-breasted Flycatcher:** about 40 were on the Northern Isles from 22 September to the end of the month, with singles elsewhere at Craighead Farm, Fife Ness (Fife) on 22–27th; Long Haven (NES) on 22nd; near Inverbervie (NES) on 25–27th, with two there on 28th; at Rattray Head (NES) on 26th and 29th; and at Cruden Bay (NES) on 30th. **Siberian/Stejneger's Stonechat:** one was on the Isle of May on 23 September. **Siberian Stonechat:** one was on North Ronaldsay (Ork) on 26 September.

Yellow Wagtail : poorly reported, but records included one at Caiplie (Fife) on 20 July; two at Scoughall (Loth) and a juvenile at Torness (Loth) on 27th; one Musselburgh (Loth) on 28th; one at Crail (Fife) on 7 August; three at Tyninghame (Loth) on 23rd; a juvenile at Girdle Ness, Aberdeen (NES) on 24th; seven near Torness (Loth) on 25th. **Grey-headed Wagtail (*thunbergi*):** one was near Ronas Hill, Mainland (Shet) on 10 July; a male on North Ronaldsay on 20–22 July, with a female on 10 August, and a male again from 12 August into October. **Citrine Wagtail:** singles were on Fair Isle on 26–27 August; one at Walls, Mainland (Shet) on 27 August; at Balta Isle, Unst (Shet) on 29 August; one at Hillswick, Mainland (Shet) on 2 September; one at Baltasound, Unst on 3–4th; on Papa Westray (Ork) on 6th and 12–17th; on Foula (Shet) 18–28th; at Norby, Mainland (Shet) on 25th, and on North Ronaldsay (Shet) on 29 September. **Richard's Pipit:** singles were on Fair Isle on 21 September; at Ushat Head, near Crosskirk (Caith) on 21st; at Cullivoe, Yell (Shet) on 24th; on North Ronaldsay (Ork) on 28th; on Foula (Shet) on 28–29th, and at Grutness, Mainland (Shet) on 29th. **Olive-backed Pipit:** singles were on Foula (Shet) on 24 September, at Burravoe, Yell (Shet) on 25–26th, at Northwall, Sanday (Ork) on 28th; at Cunningsburgh, Mainland (Shet) on 28th; at Voe, Mainland (Shet) on 28th, and at Hoswick, Mainland (Shet) on 29–30th. **Red-throated Pipit:** one was at Brough, Whalsay (Shet) on 27 September, and one on Foula (Shet) on 29th.

Hawfinch: away from breeding areas, singles were at Humbie (Loth) on 6–7 July; on Fair Isle on 7–9th and 29 July to 2 August; over Ferryhills (Fife) on 27 September, with one there the next day, and at Pierowall, Westray (Ork) on 27 September. **Common Rosefinch:** singles were on the Isle of May on 28 July; on Fair Isle on 6th, 10th and 14 August; at Quendale, Mainland (Shet) on 22 August; at Fanmore, Mull (Arg) on 26th; in Lerwick, Mainland (Shet) on 27th; on Fair Isle on 29–31st; at Baltasound, Unst (Shet) on 29th; two at Norwick, Unst on 29th, and three there on 31 August. In September there were at least 25 on the Northern Isles, mostly singles, but with two on

Plate 318. Two-barred Crossbill, Baltasound, Unst, Shetland, July 2019. © *David Cooper*

Fair Isle on 8th, two on North Ronaldsay and Sanday (both Ork) on 10th, and three on Foula (Shet) on 18th. Elsewhere there were singles on the Isle of May on 8–9th and 21 September. **Hornemann's Arctic Redpoll:** one was on North Ronaldsay (Ork) on 30 September. **Two-barred Crossbill:** a massive influx occurred from 4th July, when there was a female on Out Skerries (Shet). Virtually all were on the Northern Isles, with at least 225 in July, about 55 in August, and just two reported in September. High counts included: 16 on Fair Isle on 11 July; 20 at Voe, Mainland (Shet) on 12 July, and 18 at Stromfirth, Mainland (Shet) on 14–15 July. As birds moved from the Northern Isles more sightings were made elsewhere - one was at Wick (Caith) on 9 July; one at St John's Pool (Caith) on 19–21 July; three at Langass Wood, North Uist (OH) on 31 July, with two there on 1 August, and one still on 6th; one was at Ben Risary Plantation, North Uist, and one at Bruernish, Barra (OH) on 6th, and one at Balephuil, Tiree on 10 August - the first record for Argyll.

Lapland Bunting: first of the autumn was one at Balranald RSPB Reserve, North Uist (OH) on 27 August, and one on Fair Isle on 29th. Over 400 in September from Unst (Shet) to Lothian and Argyll, mostly in groups of five or fewer, but with high counts of 50 on St Kilda (OH) on 7th; 12 at Eoropaidh, Lewis (OH) on 12th; 12 at Kilaulay, South Uist (OH) on 17th; 50 on Hoy (Ork) on 17th; 12 on Fair Isle on 18–20th; 15 at Lamba Ness, Unst on 20th; 12 at Skaw, Unst on 21st; 15 on Foula (Shet) and on Fair Isle on 22nd; 14 at Lamba Ness on 27th; 17 on Fair Isle on 28th, and 30 on Sanday (Ork) and 15 at Balranald RSPB Reserve, North Uist (OH) on 29 September. **Snow Bunting:** sightings started on 16 September, with one at Lamba Ness, Unst (Shet), and a wave of arrivals on 28th, resulting in at least 230 more logged by the end of the month. Over 100 were on Shetland, including 42 on Out Skerries on 30th, at least 80 on Fair Isle on 30th, and at least 45 on Orkney, including 32 on North Ronaldsay on 29th. Away from the Northern Isles, one was at Buddon Ness (A&D) on 21st; one at Labost, Lewis (OH) on 22nd; four at Butt of Lewis, Lewis on 28th, and one at Keiss (Caith) on 30th. **Ortolan Bunting:** one was on Out Skerries (Shet) and one on Foula (Shet) on 22 September, and one at Duncansby Head (Caith) on 28th. **Rustic Bunting:** singles were on Foula (Shet) on 24–29 September and North Ronaldsay (Ork) on 28th. **Little Bunting:** sightings started in early September, with one on Fair Isle on 8th; then at least 14 were noted on Shetland to the end of the month, plus one on North Ronaldsay (Ork) on 10–12th; one on Fair Isle on 22–29th , with two there on 30th; one at Kilminning, Fife Ness (Fife) on 23rd, and one on the Isle of May on 28th.

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Plate 319. Late every summer I go to Fife Ness, primarily to photograph parties of Knot returning in their summer plumage. The supporting cast of other waders and non-stop Gannets always makes for an interesting spell of bird watching/photography.

On 5 August 2019, a small wader flew in and landed close to me but hidden by rocks. Not wishing to flush it, I waited. After ten minutes, the tide pushed it into view and I could see it was a Purple Sandpiper in breeding plumage - a rare occurrence as they usually arrive at the 'Ness later in the year in winter plumage.

It moved up to the top of the rocks in front of me, then proceeded to sleep. Knowing this would not last too long, I focussed and set a fast shutter speed as I was expecting it to fly off when the waves got higher. Eventually, as the waves started breaking on to its rock, a high one swamped the bird knocking it off its feet. Surprisingly, it did not fly off but struggled in the breaker desperately trying to recover its position through the cascading water. This allowed me time to refocus and fire off a burst of shots before it managed to return to its perch.

I hope that this image shows the struggle the bird endured trying to regain its composure. Obviously very tired and not wanting to fly, it was reluctantly forced off to find a more secure resting place elsewhere. As it did, I wondered where it had come from, how long its flight had taken and how it managed without a compass - an amazing accomplishment.

Equipment used: Canon 1DX mk2, Canon 500 mm lens + 1.4x converter, Manual, ISO 250, 1/2500 sec, f5.6.

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